



Ontario

ENVIRONMENTAL ASSESSMENT BOARD

VOLUME: 350

DATE: Wednesday, February 5, 1992

BEFORE:

A. KOVEN Chairman

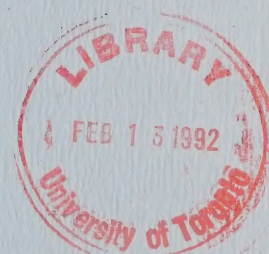
E. MARTEL Member

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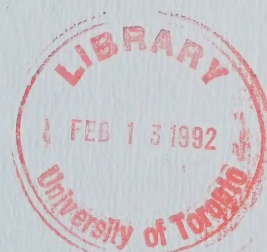
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HEARING ON THE PROPOSAL BY THE MINISTRY OF NATURAL
RESOURCES FOR A CLASS ENVIRONMENTAL ASSESSMENT FOR
TIMBER MANAGEMENT ON CROWN LANDS IN ONTARIO

IN THE MATTER of the Environmental
Assessment Act, R.S.O. 1980, c.140;

- and -

IN THE MATTER of the Class Environmental
Assessment for Timber Management on Crown
Lands in Ontario;

- and -

IN THE MATTER of a Notice by The Honourable
Jim Bradley, Minister of the Environment,
requiring the Environmental Assessment
Board to hold a hearing with respect to a
Class Environmental Assessment (No.
NR-AA-30) of an undertaking by the Ministry
of Natural Resources for the activity of
Timber Management on Crown Lands in
Ontario.

Hearing held at the offices of the Ontario
Highway Transport Board, Britannica Building,
151 Bloor Street West, 10th Floor, Toronto,
Ontario, on Wednesday, February 5th, 1992,
commencing at 9:10 a.m.

VOLUME 350

BEFORE:

MRS. ANNE KOVEN
MR. ELIE MARTEL

Chairman
Member

A P P E A R A N C E S

MR. V. FREIDIN, Q.C.)	MINISTRY OF NATURAL
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MR. B. CAMPBELL)	
MS. J. SEABORN)	MINISTRY OF ENVIRONMENT
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MR. R. COSMAN)	ASSOCIATION and ONTARIO
MS. E. CRONK)	LUMBER MANUFACTURERS'
MR. P.R. CASSIDY)	ASSOCIATION
MR. D. HUNT)	
MR. R. BERAM		ENVIRONMENTAL ASSESSMENT BOARD
MR. J.E. HANNA)	ONTARIO FEDERATION
DR. T. QUINNEY)	OF ANGLERS & HUNTERS;
MR. D. O'LEARY)	NORTHERN ONTARIO TOURIST OUTFITTERS ASSOCIATION
MR. D. HUNTER)	NISHNAWBE-ASKI NATION
MR. M. BAEDER)	and WINDIGO TRIBAL COUNCIL
MS. M. SWENARCHUK)	FORESTS FOR TOMORROW
MR. R. LINDGREN)	
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I N D E X O F P R O C E E D I N G S

Witness:

Page No.

TERRY QUINNEY; Previously Sworn. 60908

Direct Examination by Mr. O'Leary 60912

Cross-Examination by Mr. Lindgren 61048

I N D E X O F E X H I B I T S

<u>Exhibit No.</u>	<u>Description</u>	<u>Page No.</u>
2084	Two-page letter from Northwestern Ontario Associated Chambers of Commerce dated January 28th, 1992 from Mr. Scott to the Board.	60908
2085	Panel 6 witness statement re: OFAH/NOTOA entitled: Biodiversity and Featured and Other Significant Species Management.	60909
2086	Errata re: Panel 6 of OFAH/NOTOA and interrogatory responses of OFAH/NOTOA for Panel No. 6 (25 pgs) dated January 27, 1992 together with additional interrogatory responses (8 pgs) dated February 3, 1992.	60910
2087	Chart re: Panel No. 6 of OFAH/NOTOA.	60911
2088	14-page document to be using by Dr. Quinney during evidence-in-chief of Panel No. 6.	60912
2089	Paper entitled: Wildlife Habitat Management in Ontario from Policy to Practice dated December 18, 1991, Wildlife Policy Branch, Ministry of Natural Resources, by Margaret McLaren, James Baker and David Euler with transmittal memo from MNR dated January 28, 1992.	60929
2090	Paper entitled: A Proposal for a Wildlife Habitat Inventory Program, Discussion of Rationale, dated January 20th, 1992, A Draft.	60932

INDEX OF EXHIBITS (Cont'd)

<u>Exhibit No.</u>	<u>Description</u>	<u>Page No.</u>
2091	38-page document entitled: A Proposal for a Wildlife Habitat Inventory Program, Discussion of Rationale, Wildlife Habitat Inventory Committee dated January 20th, 1992, Draft.	60933
2092	29-page document entitled: A Wildlife Policy for Canada, dated 1990, Wildlife Ministers' Council of Canada.	60938
2093	Document entitled: Impact on Bird Populations of Harvesting the Boreal Mixedwood Forest, authored by D. A. Welsh, Wildlife Biologist with Department of the Environment (pgs 155-167).	60942/43

1 ---Upon commencing at 9:10 a.m.

2 MADAM CHAIR: Good morning.

3 MR. O'LEARY: Good morning, Madam Chair.

4 MADAM CHAIR: Mr. O'Leary, could we enter
5 as the first exhibit correspondence that we received
6 from the Northwestern Ontario Associated Chambers of
7 Commerce and that's dated January 28th, 1992, and it's
8 a two-page letter from Mr. Scott to the Board.

9 And I don't know if the Ministry of
10 Natural Resources received a copy, but it's comments on
11 NOACC's review of the proposed terms and conditions of
12 MNR dated January 6th, 1992.

13 Anyway, here's the correspondence and the
14 exhibit number will be 2084 and there are extra copies
15 for the parties.

16 ---EXHIBIT NO. 2084: Two-page letter from Northwestern
17 Ontario Associated Chambers of
18 Commerce dated January 28th,
1992 from Mr. Scott to the Board.

19 MADAM CHAIR: Mr. O'Leary.

20 MR. O'LEARY: Thank you, Madam Chair.

21 TERRY QUINNEY, Previously Sworn

22 MR. O'LEARY: Dr. Quinney, you realize
23 that you have been sworn already so you remain under
24 oath?

25 THE WITNESS: Yes.

1 MR. O'LEARY: Perhaps we could start off
2 just with a little housekeeping, Madam Chair, and
3 assign exhibit numbers to the various documents that
4 we'll be filing or that have been filed, starting with
5 the witness statement for Panel 6 dated November the
6 25th, 1991. It's the written evidence of the
7 Coalition, Panel 6, Biodiversity and Featured and Other
8 Significant Species Management.

9 MADAM CHAIR: Yes. This will become.
10 Exhibit 2085.

11 ---EXHIBIT NO. 2085: Panel 6 witness statement re:
12 OFAH/NOTOA entitled: Biodiversity
13 and Featured and Other
 Significant Species Management.

14 MR. O'LEARY: There is a short errata
15 that applies to this witness statement, perhaps we
16 could also mark that or leave a spot for it.

17 We have run into a little technical
18 glitch this morning, we almost left the majority of our
19 materials on the Brampton GO train in Pickering, but
20 fortunately a chunk of it has made it. There's a few
21 things we're short. If we could perhaps leave a spot
22 for that exhibit.

23 MADAM CHAIR: That's fine. We will give
24 Exhibit No. 2086 to the errata for witness statement
25 No. 6.

1 MR. O'LEARY: Thank you. And the next
2 document would be the responses of the Coalition to the
3 various interrogatories filed with the parties.

4 There is an updated version, perhaps we
5 could mark that as an exhibit number as well.

6 MADAM CHAIR: Does the Board have that,
7 Mr. O'Leary? Now, additional interrogatory responses
8 of February 3rd?

9 MR. O'LEARY: Yes.

10 MADAM CHAIR: 1992.

11 MR. O'LEARY: Perhaps we can just mark
12 that together with the interrogatory responses in the
13 package under covering letter of Mr. Hanna dated
14 January 27th, 1992 as one exhibit.

15 MADAM CHAIR: We are having trouble
16 finding our January 27th package.

17 Shall we put these together then, Mr.
18 O'Leary, the interrogatory responses of January 27,
19 which consists of 25 pages, and the additional
20 interrogatory responses of February the 3rd, 1992 which
21 has eight pages.

22 ---EXHIBIT NO. 2086: Errata re: Panel 6 of OFAH/NOTOA
23 and interrogatory responses of
24 OFAH/NOTOA for Panel No. 6 (25
25 pgs) dated January 27, 1992
together with additional
interrogatory responses (8 pgs)
dated February 3, 1992.

1 MR. O'LEARY: Madam Chair, I should state
2 at this point that there is a several page chart
3 coming, and I've spoken to Mr. Freidin about it, which
4 is unfortunate, but it's one of the technical problems
5 we've had this morning and I'm hoping to get that to
6 him before the end of the day and, at the very least,
7 at some point in the very early evening, so that he'll
8 have it tonight to assist him in preparing for
9 cross-examination.

10 Exhibit 2087, Madam Chair?

11 MADAM CHAIR: That will be Exhibit 2087,
12 yes.

13 ---EXHIBIT NO. 2087: Chart re: Panel No. 6 of
14 OFAH/NOTOA.

15 MR. O'LEARY: The other document that
16 perhaps we could mark as an exhibit now is a 14-page
17 document containing all of the illustrations that Dr.
18 Quinney will be referring to during the course of his
19 evidence-in-chief together with, included in there at
20 page 8, is one of the revised terms and conditions that
21 the Coalition is suggesting. (handed)

22 MADAM CHAIR: Thank you, Mr. O'Leary.
23 Did you say these are the overheads Dr. Quinney will be
24 using?

25 MR. O'LEARY: We're not going to use the

1 projector, but they will be illustrations that he will
2 use during the course of his evidence-in-chief.

3 MADAM CHAIR: All right. There are 14
4 pages in this document and we will give this Exhibit
5 No. 2088.

6 ---EXHIBIT NO. 2088: 14-page document to be using by
7 Dr. Quinney during
evidence-in-chief of Panel No. 6.

8 DIRECT EXAMINATION BY MR. O'LEARY:

9 Q. Dr. Quinney, good morning.

10 A. Good morning.

11 Q. Can I ask you to start off with,
12 generally what is the message that you wish to leave
13 with the Board as a result of your attendance and
14 participation in this panel?

15 A. Yes. I would like to leave the Board
16 with four essential messages from my evidence today.
17 Firstly, that biodiversity is an important concept that
18 needs to be incorporated into timber management
19 planning.

20 Secondly, that featured and locally
21 significant species management is an additional
22 important tool for managing wildlife within timber
23 management planning.

24 That thirdly, these two concepts,
25 biodiversity plus featured and other significant

1 species management, are essential and complementary
2 components of an overall strategy for incorporating
3 wildlife and non-timber values into timber management
4 planning.

5 And finally, that it's possible,
6 feasible, and cost effective to begin using these
7 management approaches now.

8 Q. Dr. Quinney, would you please turn to
9 page 7 of the witness statement, and you were asked at
10 Question 11 what constitutes biodiversity.

11 I wonder if you could start by describing
12 in basic non-technical terms what biodiversity is.

13 A. In basic non-technical terms,
14 biological diversity is encompassing all of our species
15 of plants, animals and microorganisms plus the
16 ecosystems and the ecosystem processes of which those
17 species are parts.

18 So, in other words, the phrase or term
19 biological diversity is an umbrella term for the total
20 degree of nature's variety.

21 Q. Now, in Question 11, you indicate
22 that:

23 "There are several levels of
24 biodiversity."

25 Perhaps elaborate on your response in

1 Question 11.

2 A. Yes, and to assist the Board I draw
3 their attention to Exhibit 2088 and the first
4 illustration.

5 Q. That's page No. 1?

6 A. Page No. 1.

7 Q. Element of Different Levels of
8 Biodiversity.

9 A. Entitled: Elements of Different
10 Levels of Biodiversity. And when we look at our
11 forests, there are four levels -- four different levels
12 of biodiversity that we can refer to. We can refer to
13 genetic diversity, species diversity, stand level
14 diversity and forest diversity. So those are the
15 different levels of biodiversity.

16 Q. Perhaps using the first page of
17 Exhibit 2088, could you indicate to us the differences
18 between these various levels?

19 A. You'll note on that first page that
20 each of the levels has various elements associated with
21 it.

22 For example, if we begin at the genetic
23 diversity level, there is a spatial element, in other
24 words, where, and this refers to the distribution of
25 genetic material within local populations.

1 Another element of genetic diversity
2 would be certain features, for example, genetic
3 characteristics, blue eyes versus brown eyes, blonde
4 hair versus red hair. Different colours of plumage in
5 birds.

6 An additional element associated with
7 that genetic level of biodiversity would deal with
8 measurement methods, how can we measure genetic
9 characteristics and among the measures of genetic
10 characteristics would be things like abundance and
11 richness of genes or genotypes, collections of genes.

12 By richness I'm referring to the number
13 of types present, and if you refer to page 2 of Exhibit
14 2088 I've given a couple of examples of the components
15 of biodiversity and I would just draw your attention to
16 the first two initially.

17 Richness, referring to the number of
18 types present, for example, it could be the number of
19 species present in a habitat. So on the lefthand side
20 in the box you have, for example, habitat A and on the
21 right side you have habitat B.

22 Notice that there are two types present
23 in the box on the right and only one type or species
24 present in the box on the left. Therefore, in terms of
25 richness the habitat in the box on the right is more

1 rich in terms of its diversity.

2 By abundance we refer to the number of
3 individuals present. And, again, on the lefthand side
4 there is an example of a habitat with two individuals
5 present, one from species A -- sorry, one from species
6 1, one from species 2, and on the box to the right you
7 can see a habitat that contains more individuals of
8 both species 1 and species 2.

9 So you would say that the box on the
10 righthand side that habitat is more rich -- sorry, is
11 more diverse in terms of abundance, number of
12 individuals present.

13 So if we can then go back to the first
14 page of Exhibit 2088, we can look at the species
15 diversity level of biodiversity.

16 Q. Just before you do, Dr. Quinney,
17 perhaps, you just described richness and abundance at
18 that level. Can you elaborate a little further on the
19 difficulty in terms of measurement at that level?

20 A. Yes. There are very sophisticated
21 methods to measure abundance of genes, richness of
22 genes. Some of those methodologies would include
23 electrophoresis, DNA sequencing, they're complex and,
24 of course, in terms of detecting genes, that is also
25 quite a difficult undertaking.

1 Q. Thank you.

2 A. The species diversity level of
3 biodiversity also has several elements associated with
4 it; spatial, the where, features, measurement.

5 And by the spatial element of species
6 diversity, that would be the distribution within a
7 given geographical area and that, of course, varies
8 between species.

9 Features of species diversity could
10 include taxonomic characteristics, for example, the
11 mammals versus the birds versus the plants.

12 In the bird world, obviously thousands of
13 different types of species, great species diversity,
14 for example, in the bird world.

15 In terms of measurement of species
16 diversity, generally because of the different taxonomic
17 categories, mammals versus birds, and even within the
18 category birds, they're easy to differentiate and,
19 again, we can actually measure the abundance and
20 richness of species.

21 At the stand level of biodiversity --

22 Q. Dr. Quinney, I just wonder if I can
23 ask you: Can you tell us, can there be diversity of
24 genes within one particular species?

25 A. Oh, very much so. Individuals that

1 make up a given species will vary in their genetic
2 makeup from individual to individual, yes, and from
3 population to population.

4 Q. Is that of any importance?

5 A. Oh yes. That variation can be
6 extremely important, for example, in times of
7 environmental stress in providing an insurance policy,
8 if you like, against extinction.

9 Q. All right. Sorry to interrupt you,
10 you were just about to move into stand diversity and
11 explain to us what we should understand about that.

12 A. Yes. The various element at the
13 stand diversity level could include spatial, that is
14 where, and we would be looking at within stand
15 boundaries.

16 Features could include species
17 composition of various stands, the vertical structure
18 of stands; in other words, is there layering of
19 vegetation in the stand, are there several layers in
20 the canopy, or is there only one layer at the very top.
21 That refers to vertical structure.

22 Another feature of stand diversity would
23 be the ages of the trees involved. And, again, in
24 terms of measurement we can actually measure the
25 abundance and richness of species within stands, within

1 stand types, and there are also measures with reference
2 to what is known as the vertical spatial heterogeneity;
3 in other words, measures with reference -- quantitative
4 measures of presence of vertical structure.

5 And then, finally, moving up to the
6 forest diversity level of biodiversity, again --

7 Q. Just to interrupt you once again.
8 I'm just looking at page 2 of Exhibit 2088 and I wonder
9 if perhaps 3A and 3B as identified there might be of
10 assistance in your answer in respect of our
11 understanding of stand diversity?

12 A. Yes. In 3A, the two boxes illustrate
13 differences in what is known as horizontal spatial
14 diversity; in other words, between stand diversity -
15 and what we're looking at then is the distribution of
16 stand types in the landscape, and you'll notice that
17 there is greater diversity on the righthand side, the
18 landscape on the righthand side compared with the
19 lefthand side. There is greater diversity in terms of
20 the location, of the different --

21 Q. Do you have any examples that come to
22 mind of that?

23 A. Of the different stand types.

24 Q. Sorry, Dr. Quinney. Do you have any
25 examples of that that come to mind?

1 A. Sure. We could actually use perhaps
2 an agricultural example to illustrate that, where in
3 southwestern Ontario you will often drive along the 401
4 and you'll see a series of farms with corn fields only,
5 and I contrast that to, for example, somebody's mixed
6 vegetable garden.

7 The corn field has no spatial diversity,
8 whereas a mixed vegetable garden, different types of
9 plant species growing at different rates, different
10 heights, different foliage densities, would have
11 greater diversity.

12 We could also look in 3B at diversity --
13 we can also look at diversity actually within a stand
14 in terms of a vertical element as opposed to a
15 horizontal element.

16 And on the righthand side on the bottom,
17 vertical spatial heterogeneity is referring to within
18 stand diversity. On the righthand side you can see
19 different layers of vegetation; in other words, trees
20 at different ages, trees at different ages, for
21 example, providing layers, whereas on the lefthand side
22 you don't see that vertical differentiation.

23 Q. Dr. Quinney, just taking you back to
24 the spatial diversity, the horizontal spatial diversity
25 for a second, you used the agricultural example of a

1 farm that has only one crop, and then you compared that
2 to a vegetable garden. If I could just use another
3 example such as an English flower garden, how would
4 that compare in terms of the level of horizontal
5 spatial diversity to either of those two examples?

6 A. Well, if I can try and imagine an
7 English flower garden, there would be a tremendous
8 variety, again, of different species showing different
9 structural characteristics. So that would be a very
10 diverse -- that would be an example of high diversity.

11 Q. All right, thank you. Now, to move
12 on into forest diversity, the first page of Exhibit
13 2088.

14 A. Yes. And again various elements.
15 Spatial, where, and again we're looking here at the
16 forest level landscape.

17 Features of forest level diversity would
18 include the composition and structure of stands, the
19 spatial configuration, shape, the shape of stands and
20 the species composition.

21 In terms of measurement, there are
22 measures available for abundance and richness and there
23 are also measures available for this horizontal spatial
24 heterogeneity.

25 What I would like to emphasize then is

1 that it's important that these levels and these
2 elements of biodiversity be taken care of through
3 timber management planning, and biodiversity is
4 important for a lot of reasons.

5 And if I could just provide a quote from
6 the Wildlife Strategy for Ontario, on page 41 they
7 ascribe the importance of biodiversity, and the
8 Wildlife Strategy for Ontario states that:

9 "Maintaining biodiversity is important
10 for several reasons: To keep all
11 options open, to fulfill our obligation
12 to future generations to pass on as
13 complete a world as possible, to retain
14 recognized and as yet undiscovered values
15 and uses of wildlife, to protect the
16 known and hidden interconnections and
17 dependencies which exist in ecosystems,
18 especially with respect to maintaining
19 the integrity of food webs, to minimize
20 the risk of destabilizing ecosystems
21 through the loss of species or genetic
22 diversity, to retain genetic diversity
23 and to preserve the capacity of all
24 species to evolve."

25 So it's not only me and it's not only the

1 Coalition that is calling for the sustenance of
2 biodiversity in our forests.

3 Q. Thank you, Dr. Quinney. Moving
4 further on down that page, at page 7 of your witness
5 statement at Question 12 you were asked:

6 "How are these four types...", these four
7 types you've just referred to:

8 "...of biodiversity interconnected?"

9 And you indicate that they are closely
10 interconnected and state that:

11 "In many respects they can be viewed as a
12 hierarchy on a continuum moving from the
13 most specific to the most general.
14 In order to manage for biodiversity
15 ideally all four levels of biodiversity
16 should be addressed."

17 Can you explain a little further what you
18 mean by this statement?

19 A. Yes. If I could draw the Board's
20 attention to page 3 of Exhibit 2088 and No. 1. You'll
21 recall that richness refers to the number of types or
22 numbers of species present and on the righthand side
23 what I'm showing you then is that this continuum of the
24 different levels, a hierarchy from the most specific,
25 the genetic level, up through the species, the stand,

1 to the ecosystem and forest level.

2 The message I would simply ask you to
3 take away from this graph is if you follow it from the
4 bottom up you can see by the time you end up at the
5 top, in other words, at the forest landscape, you can
6 have a tremendous amount of diversity from a variety of
7 sources, in other words, the forest landscape is going
8 to consist of all of genetic -- it's going to consist
9 of genetic variation, it's going to consist of species
10 variation, it's going to consist of stand diversity and
11 ecosystem diversity.

12 Q. Dr. Quinney, can you tell me, does
13 the Coalition have any intention to have a forest
14 manager apply this flow chart in some sort of planning
15 process fashion?

16 A. No. The sole purpose of that
17 diagram, again, is to show the continuum, the
18 hierarchy, the number of different levels and how all
19 of those different levels fit into the forest level
20 landscape.

21 Q. It's not going to be necessary for a
22 forest manager to plug in various gene types and
23 species in these boxes?

24 A. No. But, again, forest managers
25 should be aware of course that these elements exist.

1 Q. Thank you. Looking at page 9 now,
2 Dr. Quinney, of your witness statement you were asked
3 at Question 17:

4 "What are the management implications of
5 these characteristics of diversity
6 indices?"

7 A. Yes.

8 Q. And you state, halfway through the
9 response, as one of your third points:

10 "Because of the measurement difficulties
11 associated with biodiversity, there is
12 need for practical surrogate measures to
13 be used at an operational level."

14 Can you tell you us this is necessary?

15 A. Yes. It's necessary because in order
16 to implement a concept of biodiversity in timber
17 management planning one has to be able to state
18 specifically what's desired to be achieved and you must
19 be able to monitor the achievement of that desired end
20 or goal.

21 Monitoring implies measurement in the
22 achievement of sustaining biodiversity, therefore,
23 there must be a means to measure biodiversity.

24 Q. All right. Now, in the second last
25 sentence of your response to Question 17 you state

1 that:

2 "The surrogate measures must be capable
3 of expression in measurable, concrete
4 terms and of being practically monitored
5 through the timber management planning
6 process."

7 A. Yes.

8 Q. Are you aware of any other support
9 for this proposition?

10 A. Yes, support -- yes. Behind Tab 17
11 of my witness statement is a paper by Dr. Daniel Welsh
12 of the Canadian Wildlife Service.

13 Q. Before you continue on, I meant also
14 to add that you stated in part, the very next sentence
15 that:

16 "In my opinion, the use of FECs as
17 a surrogate measure would be appropriate
18 for assessing biodiversity."

19 And looking at those two sentences
20 together, I would ask: Are you aware of any other
21 opinions that support your position?

22 A. Support my position for using FECs as
23 a feasible surrogate measure to manage biodiversity?

24 Q. That's correct.

25 A. And the answer is, yes, and I would

1 like to provide you with a couple of examples and one
2 is Dr. Daniel Welsh from the Canadian Wildlife Service
3 in this paper, it's attached, that is in my witness
4 statement, and I'll just read you one brief quote that
5 occurs on the 8th page, third paragraph.

6 If you count in eight pages, in the
7 section entitled Managing for Biodiversity, it's right
8 after a diagram, a page of diagrams, and under the
9 section Managing for Biodiversity, if we go down three
10 paragraphs --

11 MR. FREIDIN: Sorry, page 8?

12 THE WITNESS: Under the section Managing
13 for Biodiversity. Have you located it now?

14 MR. O'LEARY: I think what's happened is
15 there's been a copying problem, and why don't you read
16 it and we'll have to go and obtain the balance of it.

17 MADAM CHAIR: Yes. We were supplied
18 subsequently with a complete text of the article.

19 MR. O'LEARY: Yes. That's attached to
20 the errata.

21 MR. FREIDIN: I borrowed Mr. Pascoe's.
22 It's all marked up.

23 MADAM CHAIR: Your name doesn't appear on
24 that; does it, Mr. Freidin?

25 MR. O'LEARY: With a little word saying

1 'I agree'.

2 THE WITNESS: Under the section Managing
3 for Biodiversity, third paragraph down, Dr. Welsh
4 states:

5 "The only way to conserve a breeding
6 place for all of them in perpetuity is to
7 ensure a continuing supply of forest
8 ecosystem types."

9 I would also like to give two additional
10 examples. One is from a paper entitled Wildlife
11 Habitat Management in Ontario from Policy to Practice
12 dated December 18, 1991, Wildlife Policy Branch,
13 Ministry of Natural Resources, by Margaret McLaren,
14 James Baker and David Euler.

15 MR. O'LEARY: Q. Dr. Quinney, can you
16 tell us when that document was received approximately?

17 A. Yes. I received that document Friday
18 afternoon in my office.

19 Q. All right. Attached to it - we are
20 going to ask that this be marked as an exhibit - is a
21 memorandum from the MNR dated January 28th, 1992 and
22 that indicates that it's being transmitted to, amongst
23 others, Dr. Quinney. (handed)

24 So in terms of identifying it for the
25 record, that document is attached to that memorandum

1 and it's to the members of the Habitat Inventory
2 Committee and Population Monitoring Committee and
3 memorandum is three pages and the paper which Dr.
4 Quinney identified totals 14 pages. (handed)

5 MADAM CHAIR: Thank you. This will
6 become Exhibit 2089.

7 ---EXHIBIT NO. 2089: Paper entitled: Wildlife Habitat
8 Management in Ontario from Policy
9 to Practice dated December 18,
10 1991, Wildlife Policy Branch,
11 Ministry of Natural Resources, by
Margaret McLaren, James Baker and
David Euler with transmittal memo
from MNR dated January 28, 1992.

12 THE WITNESS: May I read just two quotes
13 from that. I direct your attention to page 9,
14 paragraph 3, the authors state:

15 "Use of FEC units as a basis for a
16 spatial wood supply model will make it
17 possible to plan for maintenance of a
18 supply of ecosystems."

19 On page 10, paragraph 1, the authors
20 state:

21 "Planning to maintain all ecosystems,
22 including successional stages, combined
23 with periodic checks that predicted
24 populations are actually present, both
25 simplifies planning and decreases risk of

1 losing habitat for many species that are
2 difficult to observe or about which
3 little is known."

4 MR. MARTEL: Could I ask you a question
5 then, Dr. Quinney?

6 THE WITNESS: Yes, sir.

7 MR. MARTEL: Having just received this
8 document and being directed to two sections of it, what
9 are the instructions with respect to this. Is this
10 just a study paper, or is this a directive to various
11 people in the field that this is the way they're to
12 manage?

13 THE WITNESS: The covering letter that I
14 received from the Chairman of the MNR's Population
15 Monitoring Committee indicated that that paper and the
16 others that were included in the package were for my
17 comments. They were inviting my comments on all of the
18 enclosed papers.

19 MR. MARTEL: Does it appear to you,
20 though, MNR is moving in this direction?

21 THE WITNESS: I can say this, Mr. Martel,
22 that certainly members of those various committees
23 certainly are.

24 MR. MARTEL: Yes, it looks like some
25 pretty-heavy hitters here are recommending this.

1 THE WITNESS: Yes, sir.

2 MR. MARTEL: And moving in that
3 direction.

4 THE WITNESS: Yes, sir.

5 MR. MARTEL: Okay.

6 MR. O'LEARY: Mr. Martel, I might simply
7 direct your attention to the covering memorandum also
8 which, to some extent, addresses your question about
9 the purpose of the paper and that does indicate also
10 that the Ministry's looking for comments from the
11 individuals mentioned on page 1 of that memorandum in
12 respect to that paper.

13 MR. MARTEL: By the time this hearing is
14 done this might be in place, just considering the
15 length of time it's taken so far.

16 THE WITNESS: May I provide one final
17 example of additional support for my saying that FECs
18 provide a feasible surrogate measure, and that final
19 example would be from an additional paper authored by
20 Dr. James Baker who, as I just mentioned, is
21 Chairman -- mentioned as Chairman on the final page of
22 that memo that you received. I believe he's mentioned
23 as Chairman of the Wildlife Habitat Inventory Program,
24 and in a paper titled: A Proposal for a Wildlife
25 Habitat Inventory Program, Discussion of Rationale

1 dated January 20, 1992.

2 MR. O'LEARY: Producing a copy of that
3 now. (handled)

4 MADAM CHAIR: Thank you, Mr. O'Leary.
5 Would you like an exhibit number for this?

6 MR. O'LEARY: Please.

7 MADAM CHAIR: Exhibit 2090. The title
8 is, A Proposal for a Wildlife Habitat Inventory
9 Program, Discussion of Rationale, dated January 20th,
10 1992, A Draft.

11 ---EXHIBIT NO. 2090: Paper entitled: A Proposal for
12 a Wildlife Habitat Inventory
13 Program, Discussion of Rationale,
 dated January 20th, 1992, A
 Draft.

14 THE WITNESS: Yes.

15 MR. O'LEARY: I believe this document was
16 circulated a couple of days ago.

17 MADAM CHAIR: And it has nine pages.

18 MR. O'LEARY: Sorry, we gave you the
19 wrong paper.

20 MADAM CHAIR: Wrong paper.

21 MR. O'LEARY: We're going to --

22 THE WITNESS: I received quite a package
23 on Friday.

24 MADAM CHAIR: Do you want us to receive
25 this later?

1 MR. O'LEARY: We will be marking that as
2 an exhibit later as well, perhaps we could just leave
3 it on the record.

4 MADAM CHAIR: It's already on the record.
5 Why don't we leave it as Exhibit 2090. And we have
6 another --

7 MR. O'LEARY: I'm producing a paper
8 entitled: A Proposal for a Wildlife Habitat Inventory
9 Program, Discussion of Rationale, Wildlife Habitat
10 Inventory Committee dated January 20th, 1992. (handed)

11 MADAM CHAIR: Thank you, Mr. O'Leary.
12 All right. This document will become Exhibit 2091 and
13 it is approximately 38 pages in length with some
14 appended tables and it is also marked Draft.

15 ---EXHIBIT NO. 2091: 38-page document entitled:
16 A Proposal for a Wildlife Habitat
17 Inventory Program, Discussion of
18 Rationale, Wildlife Habitat
Inventory Committee dated January
20th, 1992, Draft.

19 MR. O'LEARY: Q. Dr. Quinney, can you
20 tell me, this document and Exhibit 2090, you made
21 reference to a package, what are you talking about that
22 you received?

23 A. The memorandum which the Board has
24 received a copy of served as a cover letter explaining
25 the contents of a package and that package consisted of

1 several papers.

2 All of the papers are listed in the
3 memorandum, all of the papers that I was provided with
4 are listed, I believe, at the bottom of the first page
5 of the memorandum.

6 Q. So they all came from the MNR?

7 A. Yes.

8 Q. And you received them last Friday?

9 A. Yes.

10 Q. All right, thank you. And I see on
11 the front of this and Exhibit 2090 someone has written
12 the word Draft. Is that of any significance?

13 A. Yes, I presume that either Dr. Baker
14 or somebody else at MNR wrote that on.

15 Q. Thank you. Sorry, you were again
16 referring to the paper as additional support for your
17 position that FECs can be used as surrogate measures.

18 A. Yes. If I may direct the Board's
19 attention to page 27.

20 MR. FREIDIN: Which exhibit?

21 MR. O'LEARY: 2091.

22 THE WITNESS: Which is: A Proposal for a
23 Wildlife Habitat Inventory Program, Discussion of
24 Rationale. Page 27, paragraph 4, Dr. Baker states:

25 "FEC vegetation types provide a superior

1 method for describing habitat of some
2 species of wildlife at the eco-element
3 scale such as forest songbirds compared
4 to FRI descriptions. Furthermore, the
5 FEC system is used by forest managers for
6 silvicultural planning and, thus, it
7 provides a common language for both
8 forest managers and wildlife managers."

9 Dr. Baker goes on to say on the same

10 page, paragraph 6, that:

11 "FECs can be mapped using FRI information
12 as well as other available information."

13 MR. O'LEARY: Q. Thank you, Dr. Quinney.

14 Now, moving on to the area in your witness statement
15 you've entitled Significance of Biodiversity, I ask you
16 to turn to Question 18 at page 10 and you're asked:

17 "What is the significance of biodiversity
18 for timber management planning?"

19 You state that:

20 "Biodiversity has significance both from
21 ecological and socio-economic
22 perspectives. Ecologically, biodiversity
23 is a measure of the health and resilience
24 of the population or ecosystems.

25 Generally, populations having high

1 diversity tend to have a high degree of
2 resilience. Resiliency is a key
3 characteristic necessary for
4 sustainability."

5 Can you tell us what evidence you have or
6 what information you rely upon in support of that
7 statement?

8 A. Yes.

9 MADAM CHAIR: Go ahead, Dr. Quinney.

10 THE WITNESS: Okay. Resilience is a key
11 to maintaining viable populations, and I direct your
12 attention to the Wildlife Strategy for Ontario, and on
13 page 42 at the very bottom in a box the Wildlife
14 Strategy states:

15 "For a population to be viable it must
16 be large enough, be supported by
17 sufficient good quality habitat and
18 contain sufficient genetic diversity to
19 cope with environmental stresses and new
20 selection pressures over an indefinitely
21 long period."

22 So what I'm doing then is I'm providing
23 corroborative examples of the importance of resilience.

24 Another example -- one more example would
25 be from A Wildlife Policy for Canada dated 1990, and

1 I'll just read a brief quote from page 10 under the
2 heading Wildlife and Biodiversity.

3 MADAM CHAIR: Do we have that, Dr.
4 Quinney?

5 THE WITNESS: Madam Chair, I am not sure
6 whether it's an exhibit or not.

7 MR. O'LEARY: That appears to have fallen
8 upon the tracks in Pickering. We will get a copy,
9 Madam Chair. Perhaps you could make reference to the
10 statement and we'll try and give it an exhibit number
11 later.

12 MADAM CHAIR: You want to exhibit it at
13 some point?

14 MR. O'LEARY: Yes, we could --

15 MADAM CHAIR: Give it an exhibit number
16 then.

17 MR. O'LEARY: Please.

18 MADAM CHAIR: 2092. What's the title of
19 it, Dr. Quinney?

20 THE WITNESS: A Wildlife Policy for
21 Canada, dated 1990, Wildlife Ministers' Council of
22 Canada.

23 MR. O'LEARY: How many pages is it, Dr.
24 Quinney.

25 THE WITNESS: I believe it's 28 pages.

1 MR. O'LEARY: 29 pages.

2 THE WITNESS: Sorry, yes.

3 ---EXHIBIT NO. 2092: 29-page document entitled: A
4 Wildlife Policy for Canada,
5 dated 1990, Wildlife Ministers'
6 Council of Canada.

7 THE WITNESS: On page 10, under the
8 heading Wildlife and Biodiversity, the Wildlife Policy
9 for Canada states:

10 "Canada has approved the World Charter
11 for Nature which affirms that every form
12 of life warrants respect regardless of
13 its worth to people and that the genetic
14 viability on the earth shall not be
15 compromised. The population levels of
16 all life forms, wild and domesticated,
17 must be at least sufficient for their
18 survival and, to this end, necessary
19 habitats shall be safeguarded."

20 MR. O'LEARY: Q. In terms of the
21 importance of sustainability and resilience, Dr.
22 Quinney, do you have any real live examples that you
23 could use to help us understand what you mean?

24 Would a lady slipper orchid help?

25 A. Lady slipper orchid is quite common
in the boreal forests of northern Ontario and

1 populations of lady slipper orchids are going to
2 exhibit genetic variability. There will be some
3 differences in genetic makeup between various
4 subpopulations of lady slipper orchids when you look at
5 the landscape across the north.

6 Now, suppose there was some environmental
7 threat to lady shipper orchids that came along, for
8 example, a disease or insect that consumed them, it may
9 very well be that while most of the population of those
10 orchids would be susceptible to the disease, because
11 there's a wide range of genetic variability there may
12 very well be subpopulations that are resistant to that
13 disease and, again, what you would have with that
14 genetic variability then is an insurance policy against
15 extinction, and that's why it's important then to
16 maintain various subpopulations to guard against, for
17 example, the potential for extinction.

18 Q. So that's an example of something
19 that possibly could happen. Do you have an example
20 perhaps on a more human scale, and I'm thinking of
21 tuberculosis and the impact on northern Canadian
22 natives. Can you tell us a little more about that?

23 A. Well, yes. It's my understanding
24 that our far northern Native peoples, their populations
25 were literally decimated by tuberculosis. However,

1 presumably there were -- there was sufficient genetic
2 variability in some of the subpopulations that
3 permitted survival of some individuals, given that
4 terrible, terrible disease threat and, as a result, of
5 course, they weren't all wiped out.

6 But, again, it emphasizes, I believe, the
7 great importance in maintaining genetic diversity, not
8 only in human populations but, of course, the entire
9 plant and animal world.

10 Q. Moving on now to Question 19 on page
11 10 of your witness statement, Dr. Quinney, you were
12 asked:

13 "Why is it necessary to manage
14 biodiversity in timber management
15 planning; will it not take care of
16 itself?"

17 You respond by saying:

18 "There is considerable evidence that the
19 biodiversity of our forest at all four
20 levels I have described as being altered.
21 In some cases, biodiversity is being
22 significantly reduced due to timber
23 management activities, the potential
24 increases as silviculture intensifies."

25 Can you tell me what evidence you have

1 or the information is that you rely upon in support of
2 this statement?

3 A. Yes. I provided evidence through
4 interrogatory responses to Forests for Tomorrow I
5 believe Nos. 4 and 6, and the Ministry of Natural
6 Resources Interrogatory 5(b).

7 MADAM CHAIR: Dr. Quinney, could you
8 repeat that, please?

9 THE WITNESS: Yes. I've provided
10 evidence on that question in response to FFT
11 Interrogatory No. 4 and 6, I think, and Interrogatory
12 5(b) from the Ministry of Natural Resources.

13 MR. O'LEARY: Q. Still in response to
14 that question, can you tell me, does the paper of Dr.
15 Welsh have any bearing on my question?

16 A. Yes.

17 Two papers in fact by Dr. Welsh, one
18 which is already in the witness statement behind Tab 17
19 is relevant in this regard and an additional paper by
20 Dr. Welsh which I cite in response to MNR Interrogatory
21 5(b).

22 MR. O'LEARY: Perhaps we could file and
23 mark that one as an exhibit entitled: Impact on Bird
24 Populations of Harvesting the Boreal Mixedwood Forest
25 authored by D. A. Welsh, Wildlife Biologist with

1 Department of the Environment, and it consists of pages
2 155 through to 167. (handed)

3 MADAM CHAIR: Thank you, Mr. O'Leary.

4 This document will become 2093. And what
5 is the date on this?

6 MR. O'LEARY: It just wasn't readily
7 apparent.

8 THE WITNESS: I may be able to provide
9 you with a date, Madam Chair. I'm afraid I can't give
10 you a date, but I can give you where it was -- where it
11 was located. It was located in the Boreal Mixedwood
12 Symposium.

13 MR. FREIDIN: The one in Thunder Bay?

14 THE WITNESS: Pardon me?

15 MR. FREIDIN: Thunder Bay?

16 THE WITNESS: Sault Ste. Marie.

17 MADAM CHAIR: Is there a date on that
18 conference or...

19 THE WITNESS: I'm sorry, I don't have
20 that.

21 MR. O'LEARY: We could try and find that
22 out, Madam Chair.

23 MADAM CHAIR: Thank you.

24 ---EXHIBIT NO. 2093: Document entitled: Impact on
25 Bird Populations of Harvesting
the Boreal Mixedwood Forest,

1 authored by D. A. Welsh, Wildlife
2 Biologist with Department of the
Environment (pgs 155-167).

3 MR. O'LEARY: Q. Moving on now, Dr.

4 Quinney, to the portion of your witness statement
5 entitled Recommended Approach to Manage Biodiversity,
6 which commences on page 14, the Coalition's terms and
7 conditions 158 through to 162 show a management
8 approach to biodiversity.

9 In response to Question 24 of the witness
10 statement, you state that:

11 "A minimum standard of 10 per cent of the
12 land area in each forest ecosystem
13 classification site type must be
14 maintained at all times in the oldest
15 age-class for each forest management
16 unit."

17 That's found in the first paragraph of
18 your response. Can you explain what this means in
19 operational terms?

20 A. Yes. No. 1, I have provided answers
21 to that question through interrogatories, but I would
22 also like to provide an illustration. The
23 interrogatories, OFIA No. 5; MNR No. 7(a), 7(b); and
24 FFT 7(b).

25 -- Madam Chair, Mr. Martel, if I could then

1 illustrate for you what the minimum standard of 10 per
2 cent means in operational terms, I would like to direct
3 your attention to page 4 of Exhibit 2088, it's the one
4 entitled Minimum Age-Class Distributions by FEC Type
5 for Biodiversity.

6 Yes, Scenario 1, Normal Rotation/
7 Extensive, as opposed to Shortened Rotation/Intensive
8 Silviculture.

9 Now, by way of preface, the OFAH/NOTOA
10 Coalition is proposing that the definition of
11 age-classes, the definition of age-class limits and the
12 setting of rotation age for stands in each FEC site
13 type be done at the local FMU level through extensive
14 public consultation.

15 Our approach here recognizes that an even
16 distribution of age-classes on a fixed rotation -- our
17 approach recognizes that an even distribution of
18 age-classes on a fixed rotation designed to maximize
19 wood fiber is not necessarily adequate to maintain
20 biodiversity.

21 So on page 4 then, for the purposes of
22 this illustration in the graphic, let's suppose that
23 the FMU here contains two FEC types only, shown as FEC
24 type 1 and FEC type 2. So, for example, the FMU
25 contains two FEC types only.

1 And, again, for the purposes of the
2 illustration, let's say that 60 per cent of the entire
3 land area of the FMU is comprised of the various
4 age-classes of FEC type 1, and that 40 per cent of the
5 land area of the FMU is comprised of the various
6 age-classes of FEC type 2, and for illustration
7 purposes, let's assume that the total FMU area is a
8 hundred square kilometres.

9 So, in other words then, we've got 60
10 square kilometres in the various age-classes of FEC
11 type 1 and 40 square kilometres in the various
12 age-classes of FEC type 2.

13 The biodiversity objective here is going
14 to be to maintain six square kilometres of the FMU in
15 the oldest age-class of FEC type 1.

16 You'll recall that total area of this FMU
17 in the various age-classes of FEC type 1, 60 square
18 kilometres, 10 per cent of 60 square kilometres is six
19 square kilometres of the FMU in the oldest age-class of
20 FEC type 1.

21 The biodiversity objective in terms of
22 the second FEC type, FEC type 2, four square kilometres
23 of the FMU must be maintained in the oldest age-class
24 of FEC type 2.

25 So, again, in terms of the total area in

1 the FMU with reference to FEC type 2, we have 40 square
2 kilometres in the various age-classes of FEC type 2.
3 We want to maintain 10 per cent. Ten per cent of the
4 40 is four square kilometres.

5 The age-class categories and the rotation
6 age, as I mentioned, are to be determined at the local
7 FMU level. For this illustration, five age-classes for
8 FEC type 1 and seven age-classes for FEC type 2.

9 If you look at the graphic age-class 4,
10 you can see that the commercial rotation age for FEC
11 type 1 is age-class 4, and for FEC type 2 the
12 commercial rotation age is age-class 6.

13 MR. FREIDIN: Just do those rotation ages
14 again.

15 THE WITNESS: Yes.

16 MADAM CHAIR: You're telling us that's
17 your assumption, Dr. Quinney? One can't gather that
18 from the horizontal axis?

19 MR. FREIDIN: That's why I'm asking him
20 to repeat it.

21 THE WITNESS: Yes, okay. Rotation age
22 for FEC type 2, age-class 4, rotation age for FEC type
23 2, age-class 6.

24 On the Y axis is the area of the FMU in
25 each of the age-classes in each of the two FEC types.

1 So what we have done here then is with these rotation
2 ages for each of the FEC types, with the age-classes
3 for each of the FEC types we have been able to maintain
4 our objective of keeping 10 per cent of the oldest
5 age-class for each of the two FEC types present.

6 MADAM CHAIR: Excuse me, Dr. Quinney. I
7 don't understand that because when I -- I think I'm
8 confusing the horizontal axis with...

9 THE WITNESS: Let look at 6.

10 MADAM CHAIR: And you say the rotation
11 age of FEC 2 is 6 as shown on this diagram. What I'm
12 saying is, I don't see how in this scheme you've
13 preserved any of the FEC type 1 forest cover.

14 THE WITNESS: In this example, for FEC
15 type 1, ecologically FEC type 1 doesn't exist after
16 age-class 5, that's the oldest it could have physically
17 achieved. So as an example, some tree species, some
18 communities are going to have a different lifespan than
19 others, some are going to be more long lived naturally
20 than others, ecologically speaking.

21 MADAM CHAIR: I understand that. So
22 you're saying, for example, if whatever the No. 5 is
23 supposed to be holding open, you're saying that No. 5
24 might be 130-year-old spruce?

25 THE WITNESS: Right.

1 MADAM CHAIR: So the FEC 1 type dies out
2 or whatever, disappears, and FEC 2 type is left but
3 it's also older at that point?

4 THE WITNESS: Yes. And let's say that
5 the oldest age-class for FEC type 2 is, say, 200 years,
6 200 years old, so because FEC type 2 can physically
7 survive to age-class 200, you're keeping that age-class
8 there, whereas FEC type 1, it's maximum longevity was,
9 in your example, 130 years.

10 MADAM CHAIR: Well, I'm having trouble
11 with this because we're used to seeing the forecasts of
12 age distribution with respect to FRI data, and I think
13 we're getting confused with how this information is
14 being presented, but I don't think we should stop, I
15 think we should keep going.

16 MR. O'LEARY: There is one question I
17 might ask that might help out.

18 Q. And, Dr. Quinney, as between the two
19 FEC types for each of the age-classes you've
20 identified, will the age-class necessarily be the same
21 for FEC 1 as for FEC 2? In other words--

22 A. No.

23 Q. --if we look at one--

24 A. No.

25 Q. If we said age-class -- if the local

1 FMU had said the age-class group 1 will be 1 to 10
2 years, will that be 1 to 10 for both FEC type 1 and FEC
3 type 2?

4 A. No, not necessarily. At the local
5 level what's being decided on for each FEC type, each
6 FEC that's relevant for that FMU, age-classes for each
7 FEC type and rotation ages for each FEC type are being
8 determined at that local level and they may not be the
9 same.

10 Q. And thus, as we look at the age-class
11 along the Y axis, it would actually be different
12 periods applicable for each FEC type?

13 A. Yes.

14 Q. All right. And does that help
15 explain why the FEC type 1 only seems to exist up to
16 age-class 5; whereas the FEC type 2 seems to have 7
17 classes?

18 A. Yes, that's correct.

19 Q. And just for clarification, can you
20 explain again why that is? You mentioned something
21 about longevity.

22 A. Yes, yes, yes. Again, we have
23 chosen -- we have chosen different rotation ages for
24 these different FEC types, and the ecological longevity
25 of one could be quite different from the other.

1 MADAM CHAIR: I think that this will only
2 make sense for the Board, Dr. Quinney, as we go through
3 your various scenarios.

4 THE WITNESS: Okay.

5 MADAM CHAIR: Now, is this a good time to
6 take our morning break? We have started this, but I
7 don't think we're going to be finished this in the next
8 10 minutes or so.

9 MR. O'LEARY: Very small likelihood of
10 that.

11 MADAM CHAIR: Why don't we take our
12 morning break now, come back in 20 minutes.

13 MR. O'LEARY: Fine.

14 MADAM CHAIR: Thank you.

15 ---Recess at 10:30 a.m.

16 ---On resuming at 10:55 a.m.

17 MADAM CHAIR: Please be seated.

18 MR. O'LEARY: Before we start, Madam
19 Chair, Mr. Hanna is now passing out copies of the Panel
20 6 errata and I have these copies for yourself and Mr.
21 Martel. (handed)

22 MADAM CHAIR: Thank you.

23 MADAM CHAIR: This is Exhibit 2086.

24 MR. O'LEARY: That's correct.

25 MADAM CHAIR: Mr. O'Leary.

1 MR. O'LEARY: Q. Dr. Quinney, we broke
2 and you were still reviewing part of Exhibit 2088 at
3 page 4. I was wondering if I could invite you now to
4 describe generally the difference between FEC areas or
5 FEC types?

6 A. Yes. Each FEC type is unique and
7 it's defined in terms of soil and moisture and, for
8 this illustration, we could perhaps identify FEC 1 as
9 black spruce dominated and FEC 2 as white pine
10 dominated.

11 Q. All right. Before you continue on,
12 you say it's dominated by soil and moisture. Are we
13 talking about separate terrain, different areas?

14 A. Yes. Each FEC type will occur in a
15 different location geographically on the land base.

16 Q. All right. And, sorry, you said --
17 you were giving an example of two different types of
18 trees.

19 A. Yes. For the illustration let's call
20 FEC 1, black spruce and FEC 2, white pine.

21 Q. All right. Can you tell me, what are
22 the average age lives of those two species of trees?

23 A. Yes. So the natural longevity of
24 white pine is much longer than for black spruce. Black
25 spruce is a much shorter lived species.

1 Q. And could you relate the lifespans of
2 those two species and identify which FEC area you're
3 referring them to, and then perhaps run us through an
4 example of how they would fit into the chart that
5 you've prepared?

6 A. Yes. For example, with reference to
7 FEC type 1 in age-class 5, we could consider that again
8 the oldest age-class for -- that occurs for black
9 spruce and, let's say, it's 100 to 130 years. So
10 that's why you don't see FEC type 1, any age-classes
11 beyond age-class 5.

12 Q. What's happened to the trees?

13 A. They would have died. In the case
14 of, for example, white pine, a much longer lived
15 species, you could actually -- for example, let's call
16 age-class 7, 250 to 300 years. There would be stands
17 still alive at that age, and that's why you see FEC
18 type 2 in age-classes 6 7, but not FEC type 1 in those
19 age-classes.

20 Q. Dr. Quinney, if you now want to turn
21 to the second graph you prepared entitled: Scenario 2,
22 Short Rotation/Intensive and tell us what you're
23 intending to describe in that graph.

24 A. Yes, that would be page 5. What I
25 and the Coalition have said is that age-class limits

1 and rotation ages are going to be determined at the
2 local level, they're going to involve tradeoffs at that
3 level, and that timber management alternatives, in
4 fact, should be developed using those variables, using
5 the variable of age-class limits and rotation ages
6 among other variables to, in fact, define what the
7 alternative forest structures would look like.

8 So what I mean then is that the age-class
9 limits and the rotation ages which are chosen are going
10 to result in a particular forest structure, different
11 age-classes and different rotation ages will result in
12 different forest structures, and this illustration is
13 meant to show you an example of how rotation age can,
14 in fact, affect forest structure.

15 And, again, what we're looking at is two
16 FEC types and we will use exactly the same types of
17 FECs as from the previous example.

18 The difference here is that we're going
19 on to a short rotation and, again, we have the two FEC
20 types, 60 square kilometres of the FMU is age-classes
21 of FEC type 1, 40 square kilometres of the FMU is
22 age-classes of FEC type 2.

23 The rotation age chosen is age-class 3
24 for FEC type 1 and the rotation age chosen for
25 age-class -- sorry, the rotation age chosen is

1 age-class 4 for FEC type 2.

2 The goal, maintaining 10 per cent in the
3 oldest age-classes, again, means that the goal will be
4 to maintain six square kilometres of the FMU in oldest
5 age-class of FEC type 1, and four square kilometres of
6 the FMU in the oldest age-class of FEC type 2.

7 So if you had the previous diagram
8 alongside of this one you would see different forest
9 structures. And that's all I'm illustrating there,
10 different rotation ages result in different forest
11 structures.

12 Q. Dr. Quinney, can I ask you, if you
13 had the usual commercial rotation and you didn't have
14 the biodiversity constraint, can you describe how the
15 graph would appear under those circumstances?

16 A. Yes. In the present graph with --

17 Q. You're at which graph?

18 MR. FREIDIN: When you say 'usual
19 commercial rotation', I assume you're referring to the
20 assumed rotation in Scenario 1?

21 MR. O'LEARY: No, the present. Let's say
22 the present commercial rotation without any
23 commercial -- sorry, without the constraint for
24 biodiversity.

25 MR. FREIDIN: Are we talking in the real

1 world or are we talking in terms of this exhibit?

2 MR. O'LEARY: We are talking the real
3 world.

4 THE WITNESS: Scenario 2 with a short
5 rotation, the point is, is that if that biodiversity
6 objective or constraint were not there those
7 age-classes wouldn't exist on the landscape, they would
8 have been harvested.

9 MR. O'LEARY: Q. Which age-classes?

10 A. Well, in the case of -- in the case
11 of, for example, FEC type 2, where the rotation age was
12 class 4 for FEC type 2 you would lose, for example,
13 age-classes 7, 6 and 5.

14 Q. Why is that?

15 A. Because the rotation age is when you
16 are harvesting the trees, when they are most desirable,
17 in this example, for commercial harvest.

18 Q. And the existence of -- we're looking
19 at page 5 of Exhibit 2088, the age-classes identified
20 for FEC type 2 age-classes 5, 6 and 7 are somehow the
21 result of the Coalition's proposal for biodiversity
22 constraint?

23 A. Yes.

24 MADAM CHAIR: And the assumption we're
25 making so far - we're following you so far - the

1 assumption we're making in these scenarios is that
2 harvest is the only activity we're concerned about with
3 respect to these stands?

4 THE WITNESS: In these examples.

5 MADAM CHAIR: Yes, okay.

6 THE WITNESS: But in the Coalition's
7 terms and conditions, of course, we have factored in
8 other factors that may influence the forest structure
9 out there, for example, wild fire or disease.

10 MADAM CHAIR: And also no-cut reserves?

11 THE WITNESS: Well, these examples don't
12 refer to no-cut reserves.

13 MADAM CHAIR: We just want to -- we can
14 see where you're going in this and we just want to --
15 we want you to keep going.

16 MR. O'LEARY: Q. Dr. Quinney, still on
17 page 14, the last paragraph of your response to
18 Question 24 you state that:

19 "The definition of age-class limits and
20 rotation ages involves local tradeoffs.
21 Timber management alternatives should be
22 developed using these variables among
23 others to define alternative management
24 regimes."

25 Could you please explain what you mean by

1 this and, if you felt it helpful, could you refer back
2 to our little planning illustrations that were
3 introduced as Exhibit 2062 last week.

4 Remember, Madam Chair, that's the
5 multi-coloured planning process.

6 A. Yes. On the second page of that
7 exhibit I illustrated the basis for choosing certain
8 options in which to generate alternate forest
9 structures and we have built in the biodiversity
10 maintenance there as a given.

11 So, in other words, when the forest
12 managers generate the various options, which are the
13 alternative forest structures, when they're doing that,
14 as a basis to do that they're taking into account the
15 biodiversity maintenance requirement of 10 per cent and
16 the variables, the variables of rotation age and
17 age-classes. So, again, different age-classes and
18 different rotations are going to result in different
19 forest structures.

20 Q. I see the Board was just provided
21 with a copy of that exhibit. Now, can you point out
22 for the panel where you're referring to on page 2 of
23 Exhibit 2062?

24 A. Yes. On the first page, the blue
25 box, basic public priorities, maintenance of

1 biodiversity, has been identified as a priority and the
2 planning team then, in forecasting alternative forest
3 structures, must take that into account. And the other
4 things that they will be taking into account, of
5 course, in the maintenance of biodiversity will be the
6 age-classes selected for a given FEC and the rotation
7 age selected for a given FEC.

8 Q. And in your answer to Question 24 you
9 make reference to local tradeoffs. Can you tell us a
10 little more about what you mean in respect of local
11 tradeoffs?

12 A. Yes. This goes back to my point
13 about -- in terms of maximizing wood fiber production a
14 younger rotation age may be preferable for that as
15 opposed to a longer rotation age as being preferable
16 for certain ecological reasons, for example, certain
17 species only being associated with older growth stands.

18 I can make it even more specific. A
19 certain warbler species may be -- their habitat
20 requirements may require older growth stands. Those
21 are the types of tradeoffs that I'm talking about.

22 Q. All right. And, Dr. Quinney, who
23 would be involved in discussing and making these local
24 tradeoffs?

25 A. We would have the local citizens

1 committee, the local public advisory committee, we
2 would have the planning team, the technical planning
3 team itself, and there would be opportunities for the
4 public at large also for them to express their views
5 and preferences.

6 Q. All right, thank you. Turning now to
7 Question 27 on page 16 of your witness statement, you
8 indicate that:

9 "The biodiversity management approach
10 does not require that the same area and
11 stands be used to satisfy the 10 per cent
12 requirement indefinitely."

13 Can you explain what you mean by this
14 statement?

15 You'll see that that is the last sentence
16 in the second paragraph in your response to Question
17 27.

18 A. Yes. No. 1, I've also addressed this
19 in an interrogatory response to Forests for Tomorrow
20 Nos. 10(a) through (c) but I would like to -- I'll
21 offer the Board the illustration of this, and that
22 would be found on pages 9, 10 and 11 of Exhibit 2088.

23 Starting with period 1 on page 9, what
24 we're looking at, what we're looking at is one FEC type
25 only and, let's say it's the white pine FEC type, and

1 we are looking at the various age-classes that occur on
2 the landscape of FEC type 1.

3 Now, to be honest, and to be consistent I
4 probably, rather than have you put white pine in your
5 mind we're using this to be consistent, this would be
6 the black spruce example.

7 Five age-classes, 1 denoting the youngest
8 and 5 the oldest. So in period 1 you can see on the
9 landscape where the various age-classes of FEC type 1
10 occur and you can also see portions of the older
11 age-classes scheduled for harvest.

12 If we go to period 2 --

13 Q. What do you mean by that, when you
14 say period 2?

15 A. A later period in time, for example,
16 say, a decade later or 20 years later.

17 Q. Thank you.

18 A. In other words, after the harvest
19 indicated from period 1 has taken place, you'll note
20 that from the period 1 diagram there's a section of the
21 oldest age-class that was harvested, so in period 2 --
22 period 2, that becomes the youngest age-class that has
23 been harvested.

24 You can see that the age-class 4, which
25 was harvested in period 1, also reverts to the youngest

1 age-class because harvest has occurred, but you will
2 note that the oldest age-class, No. 5 is still present
3 on the landscape.

4 And we can go even farther along in time,
5 for example, another decade or another 20 years.

6 Q. Dr. Quinney, would it be fair to say
7 that in each one of your examples you have increased,
8 or the period that you're referring to is one
9 age-class?

10 A. Yes.

11 Q. All right.

12 A. In period 3, again, you can see the
13 oldest age-class is still on the landscape, all of the
14 age-classes are still there even though harvesting has
15 occurred.

16 What I would like to emphasize from this
17 time series is that I think that this approach to
18 maintaining biodiversity, maintaining a proportion of
19 the oldest age-classes in the landscape would actually
20 be more likely to maintain biodiversity.

21 By maintaining these older age-classes as
22 described here, would be more likely to maintain
23 biodiversity than a different approach which would set
24 aside a given forest stand in perpetuity.

25 Well why? Because in setting a specific

1 stand aside in perpetuity, well, eventually that stand
2 is going to be subject to old age and death and
3 break-up and be replaced by younger stands, thereby,
4 losing the oldest age-classes.

5 In the proposal being put forward here by
6 the Coalition we have maintained the oldest age-class
7 in perpetuity, but it's moving around the landscape.

8 Q. Dr. Quinney, why is it important to
9 have the oldest age-class on the landscape?

10 A. Well, again, it can be -- there are
11 several reasons and, among them, I go back to an
12 earlier diagram showing the various components of
13 biological diversity the levels and the components.

14 I've given an example where certain
15 species, whether they be animal or birds species, may
16 be restricted or prefer older age-classes, and if
17 they're not present on the landscape then, obviously,
18 the habitat available for those species isn't going to
19 be available.

20 Q. All right. Turning back to the
21 second illustration of Exhibit 2088, that's page 2, can
22 I ask you to attempt to relate your response that you
23 just gave me to that illustration now?

24 A. Page 2.

25 Q. The simplified diagram of the

1 components of biodiversity. Again, the question is:
2 Why is it important that we have the oldest age-class
3 present on the landscape?

4 A. Well, it can be important for each of
5 the components of biodiversity shown in that
6 illustration.

7 Q. All right, thank you. Turning now to
8 page 18 of your witness statement, Dr. Quinney, in
9 particular Question 32, you are asked:

10 "How would you accommodate a situation
11 where fire destroyed all of the oldest
12 age-class for a specific FEC type in a
13 forest management unit?"

14 You have indicated that this is something
15 that is addressed. Your response is:

16 "In that circumstance, further harvesting
17 activity in the next oldest age-class
18 would be suspended for the oldest
19 stands in the age-class so that the 10
20 per cent constraint could be met as soon
21 as possible within the FMU.

22 Essentially, it would be the 'oldest
23 first' rule applied in reverse for stand
24 conservation."

25 Can you please explain how this would

1 work?

2 A. Yes. I would like to demonstrate
3 that with a graph and I believe it's page 6. So in
4 this scenario we have the oldest seral stage, we have
5 an oldest seral stage shortage for FEC type 1.

6 Q. Just so we're clear here, we've used
7 graphics which are similar to illustrations earlier.
8 We're talking about one FEC type?

9 A. Yes.

10 Q. All right.

11 A. Specifically FEC type 1, which I've
12 stated there is 60 square kilometres of the FMU area in
13 FEC type 1. We wanted to maintain 10 per cent of
14 that -- 10 per cent of that, or six square kilometres
15 as our maintenance of biodiversity.

16 Now, in this example there's a shortage,
17 okay, so we have a shortage in age-class 5 of the
18 oldest seral stage, how are we proposing to handle
19 that? And we're proposing that to handle that that
20 there be no cut in the oldest age-classes associated
21 with that FEC type.

22 Q. Dr. Quinney, I understand the
23 Coalition has prepared a revised term and condition 161
24 which is found at page 8 of Exhibit 2088 and it reads:

25 "If the 10 per cent minimum area in the

1 oldest seral stage is not met, cutting
2 and all other timber management
3 disturbances, except protection
4 activities, shall be prohibited in the
5 oldest stands comprising 20 per cent of
6 the FEC type in the FMU."

7 Can you, using page 6 of that exhibit,
8 explain how that would operate? Perhaps...

9 MR. FREIDIN: No, no, no. Madam Chair, I
10 would like the witness to explain this one without any
11 assistance.

12 MR. O'LEARY: I wasn't going to assist
13 him, I taking him --

14 MR. FREIDIN: I don't want -- I think
15 it's important. For my purposes, I think it's
16 important that I see how the witness explains this
17 without any assistance or direction, the graphs or
18 pages of anything. I would ask that --

19 MADAM CHAIR: Mr. Freidin, is your
20 objection that Mr. O'Leary leading the witness?

21 MR. FREIDIN: Yes, has been and I haven't
22 been objecting, but on this one I would like to see the
23 witness answer the question without any...

24 MADAM CHAIR: Well, we will certainly
25 hear what Dr. Quinney has to say about that, but

1 there's nothing to stop Mr. O'Leary from following up
2 with whichever question he may wish to put to the
3 witness.

4 MR. FREIDIN: Oh, he can follow up as
5 long as it's not -- I'm just saying, as long as they're
6 not leading questions, I have no problem.

7 MADAM CHAIR: What's your question again,
8 Mr. O'Leary?

9 MR. O'LEARY: The question I was asking,
10 if, referring to page 8, and that's the revised term
11 and condition 161 of the Coalition, and I had referred
12 Dr. Quinney to page 6 of that and I meant to say page
13 7, and my question is simply, and it wasn't a leading
14 question, if he could explain how that term and
15 condition would work.

16 I just happy to see that Mr. Freidin is
17 still with us here this morning. I hadn't heard from
18 him yet.

19 MADAM CHAIR: How will revised term and
20 condition No. 161 work, Dr. Quinney?

21 THE WITNESS: Yeah.

22 MADAM CHAIR: And, for the Board, I have
23 in front of me the original term and condition No. 161.
24 You might, after you tell us how this is going to work,
25 you might tell us why it's different than the original

1 term and condition.

2 THE WITNESS: Yes, okay. We're looking
3 at scenario 3, oldest seral stage shortage FEC 2, FEC
4 2. There is a shortage of the amount of area --

5 MR. FREIDIN: Are we looking at a piece
6 of paper here?

7 THE WITNESS: Yes, page 7.

8 MR. FREIDIN: Thank you.

9 THE WITNESS: And you can see in this
10 illustration in age-class 7 there are, in this
11 circumstance, two square kilometres in age-class 7, two
12 square kilometres in age-class 6, and four square
13 kilometres in age-class 5 denoted as no-cut.

14 Now, you'll recall that I've used an
15 example of this FMU consisting of 40 square kilometres
16 in FEC type 2; 60 per cent, 60 square kilometres was in
17 FEC type 1.

18 Now, we have a shortage in 7. We were
19 aiming for 10 per cent of 40 square kilometres, four
20 square kilometres in the oldest age-class. We don't
21 have it, so what we're saying in the revised term and
22 condition, prohibition in the oldest stands comprising
23 20 per cent of the FEC type in the FMU, in this case
24 FEC type 2. What we're saying is 20 per cent of 40
25 square kilometres is eight square kilometres.

1 In the oldest age-classes that can't be
2 cut; in other words, 7 -- the amount of area in 7, plus
3 the amount of areal in 6, plus the amount of area in 5
4 will total eight square kilometres.

5 MADAM CHAIR: In other words, any natural
6 catastrophy in the forest that destroys any forest
7 cover, that age-class of forest cover will be
8 substituted by taking that out of timber production?

9 THE WITNESS: If the 10 per cent of the
10 oldest age-class has been taken away by an event that
11 you've just described then, yes, harvest would be
12 suspended so that it could be replaced as soon as
13 possible.

14 MR. O'LEARY: Q. Dr. Quinney --

15 MR. MARTEL: What would you do --

16 MR. O'LEARY: Sorry.

17 MR. MARTEL: Let me stop there, because
18 as I understand it you're doubling the amount from four
19 to eight, and maybe you can explain that.

20 And, secondly, this could remain out of
21 production for a substantial -- this area could be out
22 of production for a substantial period of time, and how
23 would you replace the timber requirements, let's say,
24 for a mill at that point?

25 THE WITNESS: Well, in terms of that FEC

1 type, it could not be met from the age-classes within
2 that FEC type, it would have to come from elsewhere.

3 MR. MARTEL: All right.

4 THE WITNESS: And if it might assist the
5 Board I'll just briefly repeat that, in this example,
6 we had total acreage in FEC type 2 of 40 square
7 kilometres. We haven't met -- we have got a shortage
8 in the oldest age-class, so 20 per cent of 40 square
9 kilometres is eight square kilometres as no-cut, and
10 that's illustrated in age-classes 7, 6 and 5.

11 MADAM CHAIR: Mr. O'Leary.

12 MR. O'LEARY: Q. Dr. Quinney, can you
13 tell me -- using again illustration 7 as a starting
14 point you've indicated that that cutting is prohibited
15 in respect of age-classes 5 through 7, can you tell me
16 when prohibition against that 20 per cent would cease?

17 A. As soon as the 10 per cent in the
18 oldest age-class were achieved.

19 Q. Dr. Quinney, looking at page 8 of
20 Exhibit 2088, which is the revised term and condition,
21 I see that you have included, or the Coalition included
22 a rationale for that.

23 Do you have any additional comments in
24 respect of the reasons why the Coalition is suggesting
25 the change from the old term and condition to the new

1 revised one?

2 A. Yes. The whole purpose here again
3 is -- the purpose of this term and condition is to deal
4 with two issues as explained in the rationale.

5 That, firstly, due to historical
6 circumstances in the FMU, either man or nature induced,
7 the oldest seral state may be under represented. In
8 such a circumstance, further cutting of the remaining
9 old stands is contrary to the maintenance of
10 biodiversity and is prohibited accordingly.

11 This condition also provides a strong
12 incentive for the forest manager to ensure that
13 adequate representation of the oldest seral states of
14 all FECs within the FMU is constantly maintained. If
15 this continuous supply is to be provided there needs to
16 be sufficient incentive to encourage immediate actions
17 to provide such a supply.

18 And that's what we're trying to do, we're
19 trying to provide that incentive.

20 Q. Thank you. Turning now back to your
21 witness statement, Dr. Quinney, and the heading
22 Implementation Feasibility starting at page 19, I
23 direct you to your response to Question 34 where you're
24 asked:

25 "How much time is required realistically

1 to implement this management approach for
2 biodiversity?"

3 And you respond: starting with the second
4 sentence:

5 "In my view, it is one of the most urgent
6 issues requiring attention in timber
7 management planning in Ontario at the
8 present time. If this view is accepted
9 by this Board and the government, this
10 management approach for biodiversity
11 could be implemented within one year of
12 the Board's decision for those areas for
13 which a FEC system has been developed."

14 You then go on to state in the beginning
15 of the third paragraph that:

16 "This is not to suggest that much
17 research and development does not remain
18 to be done to improve the precision and
19 reliability of biodiversity management.
20 Instead, implementation and research and
21 development should go in parallel rather
22 than in series."

23 And my question for you is: Can you
24 explain further what you mean by that last reference,
25 'parallel rather than in series'?

1 A. Yes. What I'm suggesting is that an
2 adaptive management approach is the best way to proceed
3 here.

4 There is an urgency to deal with
5 biodiversity immediately. Part of that urgency is the
6 fact that we don't want to foreclose future options,
7 and rather than traditional or classical research that
8 would be conducted over a long period of time over
9 which we would wait for the results to eventually
10 become available, a learn-as-you-go approach, an
11 adaptive management approach would be much more
12 efficient.

13 Q. Thank you. Moving on to your
14 response to Question 37 on page 20 of your witness
15 statement, you state that:

16 "The FRI should be used to map FEC types
17 until an improved database is compiled."

18 Now, the Board has heard considerable
19 evidence about the many limitations of FRI database,
20 and I ask you whether you feel these limitations
21 invalidate in any way the Coalition's proposal?

22 A. No, they don't. Clearly it's
23 preferable to obtain improved FRI data and use it in
24 timber management planning, and there should be an
25 ongoing and recurrent process in this regard.

1 However, the FRI must provide
2 comprehensive coverage to the area of the undertaking
3 and provide a number of key variables, okay, that can
4 be tied to given FEC categories and, to the best of my
5 knowledge, there is no other database that offers
6 similar coverage to that of the FRI.

7 In situations where there is additional
8 information available, it should be used in conjunction
9 or in association with the FRI.

10 But the fact remains that the FRI is the
11 best available information and we should use it to the
12 maximum extent until the improved databases are
13 available.

14 Q. Can you tell me, Dr. Quinney, are
15 there any corroborating views that support your
16 position in this regard?

17 A. Yes. I would use two examples here.
18 One from the Chairman of the Ministry of Natural
19 Resources Wildlife Habitat Inventory Committee, Dr. Jim
20 Baker, and in his paper titled: A Proposal for a
21 Wildlife Habitat Inventory Program, Discussion of
22 Rationale.

23 Q. Which is the one we previously filed
24 and marked as Exhibit 2091.

25 MADAM CHAIR: 2091.

1 MR. O'LEARY: I believe so.

2 MADAM CHAIR: Or the shorter document,

3 2090?

4 MR. O'LEARY: It's the first of the Baker
5 papers.

6 MADAM CHAIR: That was 2090 I believe.

7 MR. O'LEARY: On page 28.

8 MADAM CHAIR: Then you're at 2091.

9 THE WITNESS: On page 28, the paragraph
10 immediately under the heading Interim Habitat
11 Classification Models, Dr. Baker states:

12 "Interim means of describing wildlife
13 habitat can be developed using our
14 present understanding of --"

15 MR. FREIDIN: Sorry. Where are you
16 reading from, sorry? Page 28.

17 THE WITNESS: Page 28.

18 MR. FREIDIN: Yes.

19 THE WITNESS: Five paragraphs down, and
20 it's the paragraph immediately under the heading
21 Interim Habitat Classification Models.

22 MR. FREIDIN: Thank you.

23 THE WITNESS: And this quote I'm reading
24 provides corroborating evidence for my statement, and
25 Dr. Baker states:

1 "An interim means of describing wildlife
2 habitat can be developed using our
3 present understanding of broad wildlife
4 habitat relationships defined in terms
5 of FRI descriptions.

6 The FRI is the only land base
7 inventory available for the forested area
8 of the province."

9 The second example I would cite was
10 information provided to me by a person by the name of
11 Mr. Rob Arnup, A-r-n-u-p, of Ecological Services for
12 Planning, that's a consulting firm, a company.

13 MR. FREIDIN: Is this an article or is
14 this a written statement that Dr. Quinney has somehow
15 obtained and wants to put in through hearsay evidence?

16 MR. O'LEARY: Well, it's neither of what
17 you say. It's personal communications. But, Dr.
18 Quinney, what is your understanding?

19 MR. FREIDIN: How am I going to
20 cross-examine him on Mr. Arnup's personal
21 understanding.

22 THE WITNESS: It's a statement that Mr.
23 Arnup made.

24 MR. O'LEARY: Well, this Board is not
25 limited the rules of hearsay and you'll have an

1 opportunity in reply to recall the gentlemen if you're
2 so inclined, if you felt it was necessary.

3 MADAM CHAIR: The Board doesn't
4 understand what you're referring to, Dr. Quinney.

5 THE WITNESS: What I'm referring to is
6 that existing FRI data, okay, can be used to generate
7 or predict FEC types, it's being done.

8 MADAM CHAIR: Oh. I thought the point
9 you were trying to make is that FRI is the best data
10 available.

11 THE WITNESS: Yes, it is. In addition to
12 being the best information available, it can actually
13 lead to predicting FEC types.

14 MADAM CHAIR: Yes. And what you want to
15 do is refer to a conversation you had with someone.

16 THE WITNESS: Yes, Mr. Arnup.

17 MR. FREIDIN: Madam Chair --

18 MADAM CHAIR: I don't know what weight
19 the Board can put on that. We can listen to what Mr.
20 Arnup said to you, but I don't know kind of reliance we
21 can put on -- just remind me, Ecological Services for
22 Planning, have we heard from this group before at the
23 hearing?

24 THE WITNESS: Possibly. I understand
25 they do consulting work for the Ministry of Natural

1 Resources and as part of that work for Ministry of
2 Natural Resources, Mr. Arnup simply told me that he is
3 using existing FRI information and other available
4 information to predict FEC types, so these things are
5 occurring.

6 MADAM CHAIR: Mr. Freidin, the Board has
7 heard your objection. Obviously whatever Mr. Arnup
8 says, Dr. Quinney has decided it has some importance.
9 I don't know what we're going to do with that, Dr.
10 Quinney.

11 MR. FREIDIN: That's my concern.

12 MADAM CHAIR: We can't put any weight on
13 what Mr. Arnup has said without having something in
14 writing before us and having him to question.

15 MR. FREIDIN: I'm suggesting if you can't
16 put any weight on it, then why hear it.

17 MR. O'LEARY: Well, that's not correct.

18 MR. FREIDIN: You can hear it, Mr.
19 O'Leary is right, you can hear any hearsay evidence you
20 want.

21 MADAM CHAIR: And we're not going to make
22 a ruling on whether this is good or bad hearsay, we're
23 not going to put -- we have never said we would put
24 weight on peoples' comments that have been quoted to
25 the Board. I am sure Dr. Quinney will be making a

1 closer connection between the value of using FRI data
2 and FEC.

3 MR. O'LEARY: All that he's indicating is
4 that it's his understanding that this is what's
5 happening in Ontario and he's indicated the source of
6 that understanding.

7 I would have thought, for the benefit of
8 the parties and the Board, that that's better than
9 simply saying, it's my understanding. He's done some
10 communications and research to come to that conclusion.

11 MADAM CHAIR: Well, we don't know what
12 research Mr. Arnup did.

13 I would suggest though that I perused
14 rather quickly Exhibits 2089 to 2091 and there is some
15 discussion in those exhibits with respect to tie-ins
16 between FRI and FEC. I think we should just move on.

17 MR. FREIDIN: If I get a chance to
18 question Mr. Baker in reply evidence -- we will be
19 bringing the Board up to date on these matters whether
20 we intend to call him or not. If you want to have him
21 here to ask questions about it, Mr. O'Leary, you can
22 ask --

23 MR. O'LEARY: And I guess at that time in
24 your examination-in-chief you'd be able to also inquire
25 as to whether or not this in fact occurred.

1 MR. FREIDIN: No. I will give evidence
2 and I will bring the Board up to date on what all this
3 stuff is about, what's going on.

4 And so I don't have any problems with
5 putting papers to the witness that my client has
6 written, I have some control over whether I can respond
7 to that. I have no control over Mr. Arnup.

8 MR. O'LEARY: Except you could call him
9 as a witness if you felt that what was said was
10 incorrect.

11 MR. FREIDIN: I can call a lot of people.

12 MADAM CHAIR: You have called a lot of
13 people, Mr. Freidin.

14 MR. FREIDIN: The criteria upon which I
15 call people was something that somebody said that was
16 incorrect, not somebody's view.

17 MADAM CHAIR: Shall we move on, Mr.
18 O'Leary.

19 MR. O'LEARY: Yes, Madam Chair.

20 Q. Moving to page 21 of the witness
21 statement, Dr. Quinney, you state -- in Question 39 you
22 indicate that:

23 "GIS is not necessary to implement the
24 approach the Coalition is proposing."

25 Why do you feel that GIS is not

1 necessary; in other words, what's your reasoning behind
2 that statement?

3 A. Well, my reasoning is that the FRI
4 database provides sufficient information for our
5 approach to be implemented now.

6 For example, the FRI database provides
7 information on, for example, stand age, area of each
8 stand. Once those stands are converted to a FEC type,
9 the FRI can actually be used to calculate areas in FEC
10 types. So my point here is that there's available
11 information to proceed.

12 Q. Thank you. Now, moving on to the
13 heading of Management Effectiveness which starts at
14 page 22 of your witness statement and looking at your
15 response to Question 40, you were asked:

16 "You mentioned four types of
17 biodiversity; namely, genetic, species
18 ecosystem and forest diversity, and how
19 does this management approach for
20 biodiversity assure forest level
21 biodiversity is maintained?"

22 You respond by saying in the very first
23 sentence that:

24 "Forest level biodiversity involves
25 a spatial component, a stand age

1 component and a stand composition
2 component."

3 Now, could you take each of those one at
4 a time and elaborate a little on what you mean by each
5 of those three components. Start if you could, Dr.
6 Quinney, with a spatial component.

7 A. Yes. The easiest way to do that,
8 spatial component, forest level, is to simply go back
9 to the diagram page 2 of Exhibit 2088 and look at the
10 examples under 3A and 3B.

11 Under 3A and 3B - 3A I gave examples of
12 between stand diversity and in 3B I gave examples of
13 within stand diversity, and these are addressing the
14 spatial component of forest level biodiversity.

15 Q. All right.

16 A. The stand age component with
17 reference to forest level biodiversity is self-evident.
18 The age of the trees involved.

19 The stand composition component of forest
20 level biodiversity would represent the species
21 composition of the stand.

22 Q. In response to Question 42 on the
23 following page --

24 MADAM CHAIR: Excuse me, I just have one
25 question, Dr. Quinney, with respect to the comments you

1 just made in item 40 of your witness statement.

2 THE WITNESS: Mm-hmm.

3 MADAM CHAIR: Is the Board missing
4 something or are you recommending the maintenance of
5 anything other than 10 per cent of the oldest
6 age-class?

7 You're not recommending setting aside
8 percentages of any other age-class or any other stand
9 type or any other species, you're just recommending the
10 10 per cent of the oldest age-classes?

11 THE WITNESS: Mm-hmm, mm-hmm.

12 MADAM CHAIR: So in fact, all you're able
13 to address directly is some 10 per cent of the oldest
14 age-class?

15 THE WITNESS: Keeping in mind, Madam
16 Chair, that in order to ensure 10 per cent in
17 perpetuity in the oldest age-classes, you're going to
18 have to have a continual -- continuing supply of the
19 younger age-classes which, of course, are also going to
20 be providing important habitat for species.

21 MADAM CHAIR: All right.

22 MR. O'LEARY: Q. Turning to Question 43,
23 Dr. Quinney, you state in response that:

24 "Local gene pools exist for some
25 species, particularly resident

1 sedentary species lacking effective
2 gene dispersal mechanisms."

3 Can you elaborate on what you mean by
4 this statement?

5 A. Yes. When I refer to a resident
6 sedentary species lacking effective gene dispersal
7 mechanisms --

8 MADAM CHAIR: Which item are we on?
9 Which page in the witness statement?

10 MR. O'LEARY: 23, it's the first
11 paragraph, second sentence.

12 MADAM CHAIR: 43. All right, thank you.

13 THE WITNESS: A resident sedentary
14 species lacking effective gene dispersal mechanisms, I
15 would contrast, for example, maybe a small orchid with
16 a migratory bird, okay.

17 There are going to be some species on the
18 landscape, some populations on the landscape that
19 aren't able to disperse move around as well as others,
20 which is not to say those local, localized populations
21 don't provide important sources of genetic diversity,
22 they do.

23 In other words, local gene pools are
24 contributing to biodiversity and, as such, they should
25 be taken into account, which they are in our approach

1 to maintaining biodiversity.

2 MADAM CHAIR: And how are they taking
3 that into account, Dr. Quinney?

4 THE WITNESS: Well, an example would be,
5 you'll see a little later on in my direct evidence that
6 our management for biodiversity approach, maintaining
7 10 per cent in the oldest age-classes, plus management
8 for featured species, plus managing for other
9 significant species - the rare, the threatened and the
10 endangered - are going to prevent extinctions at the
11 local level, at least as a result of timber management
12 activities because it's after all, our proposals are
13 framed with reference to timber management activities.

14 MR. O'LEARY: Q. Do you have any
15 specific example of a resident sedentary species and,
16 if you do, could you tell us how protection of that
17 species might be of importance?

18 A. Well, yes. We could take, for
19 example, an orchid species in the boreal forest, and
20 let's just suppose that population numbers of that
21 species are low, we definitely, as a result of timber
22 management activities, don't want to lose that orchid
23 species for a lot of reasons.

24 Some are utilitarian, for example, who
25 knows, maybe in the future there may be some component

1 of that plant that may be very important for human
2 health or medical reasons, but there are also aesthetic
3 reasons why it's worth preserving.

4 Q. Moving on now onto the heading of
5 Research Needs, which is found starting at page 24 of
6 your witness statement, I ask you to go to your
7 response to Question 46 at page 65. You state that:

8 "Natural stands not subject to timber
9 management activities must also be
10 monitored to provide a comparative basis
11 to interpret long-term trends."

12 And that's found in your third sentence
13 of the first paragraph. Is it the Coalition's position
14 that additional areas be set aside beyond the 10 per
15 cent required in the oldest seral state?

16 A. Am I suggesting that additional areas
17 be set aside beyond the 10 per cent required in the
18 oldest seral state?

19 The answer is, not necessarily, because
20 stands in already protected areas, for example reserves
21 or parks, may be sufficient to provide the information
22 required for that comparison, the comparison that we're
23 talking about, and I think that that should be the case
24 in most instances.

25 But, there may be situations where

1 specific allocations are necessary to provide that
2 comparative monitoring data. It's important that we
3 monitor natural stands not subject to timber management
4 as well as monitoring those stands subject to timber
5 management activities.

6 MR. O'LEARY: Madam Chair, we're just
7 about to move into Part 2 of the witness statement and
8 seeing as we're close to the lunch hour, I thought this
9 might be an appropriate time to break.

10 MADAM CHAIR: Good idea, Mr. O'Leary.

11 We will break for lunch now and be back
12 at 1:30.

13 ---Luncheon recess at 12:00 p.m.

14 ---On resuming at 1:35 p.m.

15 MADAM CHAIR: Please be seated.

16 Mr. O'Leary.

17 MR. O'LEARY: Thank you, Madam Chair.

18 Before I proceed with Part 2, I realized
19 that in all of the excitement this morning I forgot to
20 have this witness adopt his evidence. I thought
21 perhaps now we better do that in hindsight.

22 Q. Dr. Quinney, can you turn to Exhibit
23 2085, which is the Panel 6 witness statement, the
24 errata which was filed and marked as 2086, and your
25 responses to the parties various interrogatories which

1 is marked as Exhibit 2087.

2 Were all of the answers contained in
3 those documents and the changes as indicated in the
4 errata prepared by you or under your direction and
5 supervision?

6 A. Yes, they were.

7 Q. All right. And those terms and
8 conditions to which your evidence relates as identified
9 in the witness statement, do you adopt those and the
10 rationales as contained in the Coalition's terms and
11 conditions which is Exhibit 1637?

12 A. Yes, I do.

13 Q. Do you adopt Exhibit 2085 through to
14 2087 as your evidence in this hearing?

15 A. Yes, I do.

16 Q. All right, thank you. And, Dr.
17 Quinney, could you return to Part 2 of the witness
18 statement which starts at page 27. The very first
19 Question No. 49, you were asked:

20 "Do you use the term featured
21 species management in the same sense as
22 was described by Dr. Euler and other
23 Ministry of Natural Resources'
24 witnesses?"

25 And your response is:

1 "No, when I refer to featured species
2 management, I think of it as one
3 component in a comprehensive management
4 scheme to conserve wildlife and other
5 non-timber values through timber
6 management planning.

7 Featured species management is
8 the primary means to protect wildlife
9 values in the MNR's current timber
10 management planning process at a forest
11 level scale. All other species are
12 addressed by MNR through local area
13 concerns that deal only with a small part
14 of the habitat of most of the species."

15 Now, during his evidence in Panel 10, Dr.
16 Euler presented a graphic, which I understand has been
17 marked as part of Exhibit 472, which shows a spectrum
18 of wildlife management approaches to timber management
19 with featured species on one extreme and a progression
20 from featured species to indicator species to guilds on
21 another.

22 Can I ask you, first of all, whether you
23 reviewed Exhibit 472?

24 A. Yes, I did.

25 Q. And you've also had a chance to

1 review Dr. Euler's transcripts as they appear in Volume
2 83, pages 13829 through to 13831?

3 A. Yes, I have.

4 Q. All right. Turning first to Exhibit
5 472 - this is one of the pages - could you tell us
6 where on that continuum would the Coalition's planning
7 process be located?

8 MR. O'LEARY: I could let you use mine.

9 MR. FREIDIN: I'm just wondering, Mr.
10 O'Leary, in future panels - not there will be many
11 more - but if you're going to be referring to exhibits
12 during our examination, just give us a little bit of
13 advance notice so we can bring our copies. We would
14 appreciate it.

15 MR. O'LEARY: We will try. It was just
16 that page there. (handed)

17 THE WITNESS: Now, Madam Chair, Mr.
18 Martel, I can't fit the Coalition's proposal on to Dr.
19 Euler's continuum, he's used an alternate way of
20 looking at integrating wildlife with timber management
21 than we have.

22 Our Coalition instead, what we have done
23 is, we have built upon the strengths of various
24 approaches towards integrating wildlife habitat and
25 timber management planning in order to put forward the

1 strongest system possible.

2 So, in other words, then what we've put
3 forward is a composite of several wildlife management
4 techniques including, as I spoke about this morning,
5 forest level management, stand level management for
6 featured species, plus local level management for
7 individual species.

8 MR. O'LEARY: Q. All right. First of
9 all, do you have an opinion in respect of Exhibit 472
10 which is Dr. Euler's creation?

11 A. My opinion would be that it's overly
12 simplistic.

13 Q. All right.

14 A. And, No. 2, as I said, that we
15 certainly can't fit our approach into the continuum
16 that he has described.

17 Q. All right. Now, I understand that
18 you have prepared an illustration for the benefit of
19 the Board to help explain the Coalition's approach.

20 A. Yes, that would be page 12 of Exhibit
21 2088 titled Management Approach for Integrated
22 Wildlife/Timber Planning.

23 Now, if I may just expand for a moment on
24 this. In response to Forests for Tomorrow
25 Interrogatory No. 19 -- now, I prepared in that

1 interrogatory response which appears on page 9 of the
2 interrogatories, I prepared a detailed description.

3 MR. O'LEARY: Two copies of the updated
4 complete full interrogatory responses. (handed)

5 MADAM CHAIR: Is this contained in
6 exhibit 2087?

7 MR. O'LEARY: Yes, it is.

8 THE WITNESS: Yes, it is.

9 MADAM CHAIR: Is there anything different
10 in this than we find in Exhibit 2087?

11 MR. O'LEARY: No. It was just combined,
12 less that one response that's still coming.

13 THE WITNESS: So in the interrogatory I
14 have provided a detailed explanation of our management
15 approach, and I would just highlight then the graphic
16 on page 12, management approach and mention that we
17 have four major simultaneous objectives that we propose
18 to accomplish through this comprehensive integrated
19 approach.

20 No. 1, we will maintain biological
21 diversity including maintaining viable populations of
22 all species.

23 MR. O'LEARY: Q. If I could just stop
24 you there. You're referring to the FFT Interrogatory
25 response No. 19?

1 A. Yes.

2 MR. O'LEARY: You will find that at page
3 10 of the document I've just handed over to you, Madam
4 Chair.

5 MADAM CHAIR: Thank you, Mr. O'Leary.

6 MR. O'LEARY: It starts at page 9 and
7 actually runs through to page 12.

8 Q. Sorry, Dr. Quinney, you were --

9 A. Our second simultaneous objective is
10 to ensure adequate habitat protection for rare,
11 threatened and endangered species.

12 The third objective, ensure adequate
13 habitat provision for maintenance of desired population
14 sizes of certain species with high recreational
15 economic or other importance; namely, provincially
16 featured and locally significant species.

17 And the fourth simultaneous objective,
18 systematically design the spatial components of
19 habitat, and by that I mean habitat patch size and
20 configurations, shapes, according to local conditions
21 and wildlife needs. And the diagram --

22 Q. This is the one with--

23 A. On page 12.

24 Q. --the conical looking object.

25 A. Yes, illustrates how those

1 comprehensive objectives can be achieved. In my
2 witness statement I use an analogy of screens to ensure
3 that we capture all species, to ensure that some
4 species don't slip through the pores and, by slipping
5 through the pores, I mean being at risk because of
6 certain timber management activities.

7 So if we provide a continuous supply of
8 FEC habitats we use that in conjunction with management
9 for featured species at the stand level, in conjunction
10 with species specific prescriptions at the local level
11 we will be assured of achieving those multiple
12 objectives.

13 So the diagram then shows a coarse filter
14 level, a medium filter level and a fine filter level.
15 Just an analogy to assist you with our comprehensive
16 management approach.

17 Q. Dr. Quinney, looking at the diagram
18 again in No. 1, coarse filter, you're saying the
19 ecosystem level. Can you tell me what is it generally
20 that's being done at that level and how do you ensure
21 sustaining the FECs?

22 A. What's being done? Yes, we're
23 ensuring, we're ensuring that all FEC types are
24 maintained where they occur and we're ensuring, we're
25 ensuring that all age-classes within those FEC types

1 are supplied in perpetuity.

2 This goes back to the 10 per cent in the
3 oldest age-class. As an example, that supply, that
4 ensures continual supply of all the age-classes in a
5 given FEC and, therefore, what you're doing is, by
6 supplying those FECs and all those age-classes, is
7 you're providing the habitats that our animals depend
8 upon.

9 MADAM CHAIR: Excuse me, Dr. Quinney.
10 How are you providing all FEC types?

11 THE WITNESS: Well, it depends on the
12 given FMU. If we went out to a specific FMU, that FMU
13 will consist of, hypothetically speaking say, a dozen
14 of FEC types, and our management approach to
15 biodiversity, again, ensures that all age-classes from
16 the oldest that occur in a given FEC type to the
17 youngest will be on the landscape over time, that
18 harvesting would not totally remove an age-class from
19 the FEC.

20 MADAM CHAIR: Do you know any situation
21 in Ontario in the area of the undertaking where that
22 has occurred?

23 THE WITNESS: I can't give you an FMU
24 number, but I believe there would be examples out there
25 where the oldest age-classes within a given FEC may not

1 be adequately represented in the landscape.

2 MR. O'LEARY: Q. Dr. Quinney, what
3 information would you require in order to be able to
4 fully respond to Madam Chair's question?

5 A. Oh yes. I'd have to look at, I'd
6 have to look on a site-specific basis at all the FMUs
7 in the province.

8 Q. What information would you need from
9 each FMU to answer that?

10 A. Well, I'd need to know the types of
11 FECs that were present and I would also -- and in
12 getting that information, then I would have
13 compositional information, I would want age-class
14 information.

15 Q. All right. Just I thought perhaps I
16 could take you back to the Coalition's terms and
17 conditions, in particular 160.

18 Just so I understand, the 10 per cent
19 minimum that's referred to in there is to be applied to
20 what area, or...

21 A. The entire FMU.

22 Q. All right. And on what basis?

23 A. On the basis of the total area in a
24 given FEC type in that FMU.

25 Q. All right. And by requiring this 10

1 per cent in each FEC type of the oldest seral state,
2 what is the rule in terms of protecting the overall
3 habitat of the various species in the forest?

4 A. Yes. What you're doing is ensuring
5 that there are age-classes available for all types of
6 species. Again, some species may be -- their habitat
7 requirements may be restricted to the older age
8 classes, some may prefer the younger, the younger
9 age-classes.

10 What you're providing is a continual
11 supply of all of the age-classes so that none of those
12 species are going to disappear.

13 Q. Right. If this condition No. 160 is
14 imposed by the Board, will there be FEC types in the
15 province that will not have an oldest seral state
16 present on the landscape?

17 A. (nodding negatively)

18 Q. You have to say yes or no for the
19 reporter.

20 A. No.

21 Q. No. All right, thank you. I asked
22 you a few moments ago whether or not -- sorry, are you
23 done with --

24 A. Yes.

25 Q. I asked a few moments ago whether or

1 not you had an opportunity to review the transcript
2 evidence of Dr. Euler and I referred you to pages 13829
3 through 13831.

4 Referring to page 13820 and, in
5 particular, the second paragraph, perhaps to save time
6 it would be better if you simply indicated which
7 portion you agree or disagree with, and perhaps you
8 could read it for the Board, should we not have the
9 transcripts available for them.

10 MADAM CHAIR: And what is that transcript
11 reference, Mr. O'Leary?

12 MR. O'LEARY: Volume 83, page 13820 and
13 it's Dr. Euler.

14 THE WITNESS: On page 13820 in the second
15 paragraph Dr. Euler refers to the fact that:

16 "The only way we can achieve our habitat
17 objectives is in the timber management
18 planning process."

19 And I agree with that.

20 MR. O'LEARY: Q. All right. I should
21 note for the record that it was at this point where I
22 believe Exhibit 472 was entered in evidence.

23 MADAM CHAIR: Pardon me, Mr. O'Leary.

24 MR. O'LEARY: That's Exhibit 472, which
25 is that document. It was at that stage and in the

1 context of that evidence of Dr. Euler that that
2 document was entered in evidence.

3 Q. Dr. Quinney, moving on now to the
4 heading Need for Featured and Locally Significant
5 Species Management, in response to Question 51 on page
6 28 you state at the second line that:

7 "There remains a large number of possible
8 combinations of habitat configurations in
9 terms of patch size and configuration."

10 Can you explain what you mean by the
11 terms patch size and configuration?

12 A. Yes. The size of habitat units on
13 the landscape for a given animal are referred to as
14 patch sizes. The habitat sizes then, those patch sizes
15 on the landscape, will differ from species to species.

16 So patch size refers to a habitat patch
17 size and configuration refers to the shape of those
18 habitat patches on the landscape.

19 Q. I understand for illustrative
20 purposes you've prepared another diagram for use in
21 your explanation. Perhaps I can ask you to refer to
22 that now.

23 A. Yes. The final two diagrams from
24 this morning's Exhibit 2088. On page 13 you see a
25 hypothetical optimum habitat configuration for moose,

1 and on page 14 a hypothetical optimum patch
2 configuration for a different species, the pine marten.

3 All I would like to do here is -- simply
4 what I'm illustrating is that the ideal habitat
5 configuration for moose is different than that for
6 marten. There are species-specific differences.

7 Q. All right. You then go on, Dr.
8 Quinney, still in response to Question 51 in the last
9 portion of the fourth paragraph and state that:

10 "Tradeoffs among competing wildlife
11 demands for local habitat configuration
12 can be reached in a manageable and
13 practical way."

14 Can you provide us with an example of
15 what you mean here?

16 A. Yes. An example is provided in the
17 last two graphics I showed you with reference to a
18 hypothetical optimum habitat shape for moose as opposed
19 to a hypothetical optimum habitat configuration for
20 marten. In providing an ideal situation for moose,
21 it's not going to be ideal for marten. Obviously then
22 you can see that there are tradeoffs involving habitat
23 configuration determination between species.

24 MADAM CHAIR: But you start by being
25 limited with what is there with respect to the forest

1 cover.

2 THE WITNESS: Yes.

3 MADAM CHAIR: You don't just go out and
4 cut these shapes and engineer these patches in such a
5 simple way.

6 One question the Board has is: In your
7 view, with respect to the forest cover as described by
8 FEC characteristics, do you think that most of the area
9 of the undertaking has fairly large similar type forest
10 covered areas; in other words, would we look at a
11 forest management unit and see very large areas in the
12 same forest cover type, or do you see the area of the
13 undertaking being spotted with many intermixed FEC
14 classifications?

15 THE WITNESS: Again, it depends on
16 exactly where we go into the boreal forest, but there
17 will be some FMUs, as you describe, some FMUs will have
18 a large number of FECs, a great variety of FECs.

19 MADAM CHAIR: In that situation, doesn't
20 it make it very, very difficult to apply your 10 per
21 cent proposal?

22 THE WITNESS: No, I don't think so,
23 because let's again, hypothetically speaking, say that
24 a given FMU had 20 FEC types, again, all we're asking
25 is that the oldest age-class, 10 per cent of the area

1 in the oldest age-class be maintained.

2 MADAM CHAIR: It doesn't matter where on
3 the FMU?

4 THE WITNESS: No, no. And again that
5 will actually change over time.

6 MADAM CHAIR: Okay.

7 Mr. O'Leary.

8 MR. O'LEARY: Q. Dr. Quinney, now
9 turning to page 29, in response to Question 53 where
10 you're asked:

11 "Why is it necessary to expand the number
12 of featured species beyond the two
13 proposed by the MNR for the majority of
14 the area of the undertaking?"

15 You state that:

16 "The Ministry identified in its evidence
17 the inadequacies in their featured
18 species management approach.

19 They identified that between 20 and
20 30 per cent of vertebrate species might
21 not be provided with minimum habitat
22 requirements with only deer and moose as
23 the featured species.

24 The addition of pine marten and
25 pileated woodpecker in the boreal and

1 Great Lakes/St. Lawrence Forest regions
2 respectfully was designed to partially
3 remedy these inadequacies."

4 Can I ask you what you mean in respect
5 to -- well, first of all, what are the other
6 inadequacies that you're referring to?

7 A. Other inadequacies with reference to
8 MNR's current featured species approach include, for
9 example -- actually, I would like, for the Board's
10 benefit, to actually read a quote from one of the
11 reports that I entered this morning, and it's the
12 report titled: Wildlife Habitat Management in Ontario,
13 by Margaret McLaren, James Baker and David Euler.

14 MADAM CHAIR: The exhibit number on that
15 is 2089; is that the right one?

16 MR. O'LEARY: Yes.

17 THE WITNESS: And I would draw the
18 Board's attention to page 4 and you will see a heading
19 Limitations of the Featured Species Approach and this
20 is specifically referring to the limitations of MNR's
21 featured species approach, not the Coalition's, and two
22 paragraphs down the authors identify four fundamental
23 problems associated with this process, the process of
24 MNR's current featured species management approach.
25 No. 1, they state:

1 "Integration of wildlife concerns often
2 occurs too late in the process. The
3 integration of wildlife habitat
4 considerations should occur during the
5 design phase if managers are to influence
6 interspersions of habitat types at the
7 forest level."

8 I agree with that statement. They go on
9 to say that:

10 "Managers have no real mechanism by which
11 to assess the consequences of guideline
12 application on either the featured
13 species or other species that the
14 guidelines might reasonably be expected
15 to protect in either space or time."

16 MR. O'LEARY: Q. Dr. Quinney, can I just
17 ask you, what does that mean to you; what are they
18 saying?

19 A. I believe that they're agreeing with
20 the evidence I presented in the last panel with
21 reference to assessing, for example, the consequences
22 of using a guideline approach.

23 Q. All right.

24 A. The third fundamental problem they
25 identify is as stated:

1 "There are groups of species that
2 either (1) the guidelines as currently
3 constituted would not be expected to
4 protect; or, (2) whose habitat
5 requirements are so poorly known
6 that there is no way to assess whether
7 the guidelines provide adequate habitat."
8 I'd agree with that. And Their fourth
9 fundamental problem identified is:

10 "There is no mechanism to ensure
11 continuing habitat availability for
12 species other than moose and deer.
13 Protection of values through
14 identification of areas of concern is
15 reactive, it does not include
16 planning for future habitat.

17 For example, planning must ensure
18 that when a bald eagle nest tree becomes
19 unsuitable, other suitable trees are
20 available."

21 Q. Dr. Quinney, in addition to those
22 four fundamental problems that are identified by the
23 authors of this document in respect of the Ministry of
24 Natural Resources' featured species approach, are there
25 any other fundamental problems which you would like to

1 highlight at this time that you see?

2 A. Yes, I would, with reference to the
3 Coalition's request that the pine marten and the
4 pileated woodpecker be added to the provincially
5 featured list.

6 MNR in their evidence indicated that
7 between 20 to 30 per cent of the vertebrates in the
8 area of the undertaking may not be dealt with through
9 their existing featured species management approach,
10 and part of the reason for that is that those 20 to 30
11 per cent could be associated with older stands, older
12 age-classes.

13 They may have special habitat
14 requirements, for example, cavities in large old trees,
15 or they may require specific things in terms of habitat
16 patch size and shape, and that with the pine marten in
17 the boreal forest added as a featured species and with
18 the pileated woodpecker added in the Great Lakes/St.
19 Lawrence Forest, those concerns would be addressed in
20 conjunction with the Coalition's proposal for
21 management for biodiversity, sustaining biodiversity
22 and management for other significant species.

23 Q. Dr. Quinney, then let's move on to
24 Selection Criteria for Featured Species and your
25 response to Question 55 on page 30 where you make

1 reference to Table 6.1 which is included behind Tab 15
2 of the witness statement.

3 I think parties will note that there is
4 an errata there. It should read Tab 15 as opposed to
5 16 in your witness statement, but Table 6.1 is behind
6 Tab 15.

7 And this table includes an evaluation
8 using the selection criteria that you described in your
9 response to Question 55 for the four featured species
10 that the Coalition is recommending.

11 Can I ask you whether or not there are
12 any other species that were evaluated besides the four
13 listed in the table behind Tab 15.

14 A. Yes, there were. That is part of the
15 last interrogatory question that we're trying to
16 deliver to the Board today.

17 Q. All right. We're not going to get
18 that I suspect until after the day is over. Is there
19 anything you can add to that now which might be of
20 assistance. If not, perhaps with the consent of
21 parties we could have Dr. Quinney address it when the
22 actual document arrives. It could be first thing in
23 the morning tomorrow.

24 MR. FREIDIN: Well, I have a question. I
25 may cross-examine on it. I will be asking you about my

1 client's interrogatories. Can you tell me what the
2 species were?

3 THE WITNESS: Yes. It's a comprehensive
4 list of all of the species occurring in the boreal
5 forest and the Great Lakes/St. Lawrence Forest. In
6 other words, we used the same criteria you see in Table
7 6.1 for all of the species in both the boreal and the
8 Great Lakes/St. Lawrence Forest that may be affected by
9 timber management planning.

10 Now, we have attempted to make that as
11 comprehensive as possible. In other words, we started
12 with a species list from MNR dated roughly 1988, I
13 believe, and very recently we received an even more
14 updated list of species occurring in those -- in the
15 area of the undertaking and we wanted to make sure that
16 they had been captured and included in the evaluation.

17 MADAM CHAIR: And is the evaluation to
18 show that the selection of these four featured species
19 would protect most of the other species habitat in the
20 area of the undertaking?

21 THE WITNESS: No, Madam Chair. The
22 evaluation was conducted to select the species that
23 will be featured in the province, and by being featured
24 will be used to determine things like patch shape,
25 habitat patch shape.

1 MADAM CHAIR: Will be locally featured?

2 THE WITNESS: No.

3 MADAM CHAIR: So you're saying in
4 addition -- your evidence in this written witness
5 statement is, we have four provincial featured species
6 you would like to see.

7 THE WITNESS: Yes, yes.

8 MADAM CHAIR: Now, in addition to this
9 list of four provincial species, not locally featured
10 species, in addition to these four provincially
11 featured species, you're suggesting to the Board you
12 now have an entirely new list of species to add that
13 you want to be provincially featured?

14 THE WITNESS: No. I'm sorry, Madam
15 Chair.

16 Four species were selected to be featured
17 provincially, they were selected using this criteria
18 and many, many, a comprehensive list of species was
19 subjected to the same evaluation criteria showing that
20 the others, besides these four, would not be as well
21 suited as these four to be provincially featured.

22 Now, you're quite right, we do mention in
23 our terms and conditions categories for other
24 significant species and locally significant species,
25 but they would be determined.

1 The Coalition is not dictating what
2 additional species might be featured at a local level,
3 that would be left up to a local decision-making
4 process at the FMU level if any additional species were
5 to be chosen as locally featured.

6 MADAM CHAIR: So in summary then, Dr.
7 Quinney, you're saying that these four species have
8 been selected out of the evaluation you have done of
9 many species as being the most appropriate to be
10 provincially featured?

11 THE WITNESS: Yes, Madam Chair.

12 MADAM CHAIR: All right.

13 MR. FREIDIN: And what I was trying to
14 find out, what other species -- I think I've got that
15 answer, it's all the species I assume that Dr. Baker
16 and Dr. Euler looked at. And I want to know how many
17 pages of analysis for the hundreds of species am I
18 going to have to look at tonight if you get it to me
19 tonight.

20 THE WITNESS: The table boils down to
21 approximately eight pages for the Great Lakes/St.
22 Lawrence Forest and seven pages for the boreal forest
23 species.

24 MR. MARTEL: Remind me, Dr. Quinney.
25 Going back a long time ago weren't these two additional

1 species you've added, the pileated woodpecker and the
2 pine marten, thrown into the hopper by Dr. Euler as, if
3 you were going to try to move ahead, as being the ones
4 one would look at next or include?

5 THE WITNESS: That's quite possible, Mr.
6 Martel. I can't recall.

7 MR. MARTEL: They don't come as a
8 surprise these two to me because we've heard them over
9 and over again.

10 MR. FREIDIN: You asked Dr. Euler in
11 Panel No. 10 to speculate.

12 MR. MARTEL: Yes.

13 MR. FREIDIN: If you had to do something
14 and if you had to speculate, and he gave you those two.

15 MR. MARTEL: Those two.

16 MR. FREIDIN: They weren't those two,
17 they were two others. The great grey owl was one.

18 MADAM CHAIR: Mr. Freidin, I don't see
19 the point of you having to -- I don't think you have to
20 be alarmed at all about getting this information on
21 this evaluation when your client has been suggesting it
22 wants to provincially feature a hundred other species
23 and the Coalition is saying they don't want to, they've
24 made two additions to the list that you have now.

25 MR. FREIDIN: That's right. We're only

1 thinking, if we should review those in sufficient time
2 and, in fact, have some questions as to whether, you
3 know...

4 MADAM CHAIR: All I'm saying --

5 MR. FREIDIN: I'm not too sure what the
6 Board is going to do with all this evidence about
7 featured species and wildlife management, but you're
8 being asked, you're being asked to name two.

9 If we decide whether in fact that sort of
10 decision is something that is going to rest with the
11 Board in the end, if in fact you decided that's
12 something you want to do, I may want to have something
13 to say -- my client may want to have something to say
14 about whether you should choose those two, if you're
15 going to choose any at all.

16 So it's not as simple as it may look.
17 That's why I'm interested in knowing what the list is.

18 And I may have a problem dealing with
19 this analysis in leaving, when obviously this
20 interrogatory was to be answered a long time ago so I
21 could consult with my people to determine what I should
22 do with it in cross-examination. I may not have a
23 problem, but I'm just advising you.

24 THE WITNESS: Madam Chair, I can assure
25 you that the only reason that it hasn't come yet is we

1 wanted it as comprehensive and up to date as possible
2 and we're using MNR's best information to help us do
3 that.

4 MR. O'LEARY: Perhaps if I could offer a
5 suggestion we can deal with it tomorrow morning when we
6 have it, and if Mr. Freidin has a concern at that time
7 perhaps we could hear it out and see what it is, and if
8 it's a fair one, I will be the first to admit that if
9 he needs more time we'll try and make that available.

10 But, I mean, all we're doing is we're
11 bringing forth the process by which the four species
12 that the Coalition is advocating as the featured
13 species has been used and how we whittled it down to
14 those four. I don't think it's, you know, a
15 complicated area of the evidence.

16 MADAM CHAIR: Move on, Mr. O'Leary.

17 MR. O'LEARY: Q. Dr. Quinney, now
18 looking at the area of the Implementation Feasibility
19 of the Featured Species that the Coalition is
20 proposing, in response to Question 61 on page 34 of the
21 witness statement you indicate that:

22 "The Ministry of Natural Resources has
23 indicated that the public should evaluate
24 their timber management actions based
25 upon what they achieve and not by how

1 they achieve it."

2 Can you say a little more about that
3 comment?

4 A. Yes. What I would in fact do is, I
5 direct the Board's attention to part of Dr. Euler's
6 testimony in Panel 10, and I believe it was -- there's
7 an example in one of the pages you had just mentioned
8 when you brought up Dr. Euler's testimony, Mr. O'Leary.
9 Yes, that is Volume 83, page 13820.

10 Q. That's where you took that reference
11 from?

12 A. Yes, down at the bottom of the page.

13 Q. All right.

14 A. And Dr. Euler says:

15 "Judge us by what we are achieving, are
16 we achieving what we set out to achieve
17 or are we not? I think it is far more
18 important to judge us by what we
19 achieve."

20 That's what I'm referring to.

21 Q. That's at the bottom of -- now read
22 the whole paragraph, the last paragraph, page 13820,
23 Dr. Euler says:

24 "The second point is I would like to have
25 as a major theme, judge us by our

1 objectives, how are we doing, are we
2 achieving what we set out to achieve
3 or are we not. I think it is far more
4 important to judge us by what we achieve
5 than by some particular tool that we
6 might use in achieving that objective."

7 The word 'took' had appeared and I
8 believe they meant tool.

9 MR. FREIDIN: Correct. That's what I
10 wanted to point out, 'tool', yes.

11 MR. O'LEARY: Q. Later in your response,
12 Dr. Quinney, to Question 61 you state:

13 "Terms and Conditions 153 and 157 of
14 the Coalition are necessary in order to
15 have sufficient information to evaluate
16 the performance of timber management
17 activities in terms of wildlife
18 populations at a forest management unit
19 level."

20 Do you not have sufficient information at
21 the present time?

22 A. Not at a forest management unit level
23 which is where the habitat changes, the habitat
24 manipulations are occurring.

25 And, of course, this is a great

1 difficulty, because how can one tie the district moose
2 population targets, population targets can't be tied to
3 the ground level, for example, in an FMU where the
4 habitat is being manipulated.

5 So you need that tie between population
6 target, the habitat, and the timber management
7 activities.

8 Q. Why is this population objective
9 important again?

10 A. Well, it's very important to have
11 quantitative, achievable objectives, and clearly in
12 terms of the Coalition's terms and conditions it's
13 appropriate to have population and habitat targets for
14 featured species in the timber management plans because
15 it's the timber management activities that are altering
16 the forest structure.

17 MADAM CHAIR: Excuse me, Dr. Quinney.
18 Did you say habitat and populations?

19 THE WITNESS: Yes. And if it would help
20 clarify, I would just refer you to our terms and
21 conditions, specifically term and condition No. 5 where
22 we are asking for measurable, quantified objectives for
23 5(2) population levels for all featured species and (3)
24 supply of habitat conditions required to meet
25 population objectives for the featured wildlife

1 species.

2 You can also see there we also are
3 requesting the supply of forest ecosystem types to
4 maintain or enhance biological diversity.

5 MADAM CHAIR: We've had this discussion
6 or we had this discussion, rather, in our evidence on
7 the previous panel on which you appeared, and the Board
8 is still confused about the difference between
9 providing wildlife habitat and providing a certain
10 number of animals.

11 Your position is that within each forest
12 management unit, within each timber management plan--

13 THE WITNESS: Mm-hmm.

14 MADAM CHAIR: --you want to say in that
15 plan that the objective is to produce "x" dozen moose,
16 "x" dozen of pine marten, pileated woodpecker and deer?

17 THE WITNESS: Mm-hmm, mm-hmm.

18 MADAM CHAIR: And that's what you want to
19 see in each timber management plan?

20 THE WITNESS: Mm-hmm, mm-hmm. And of
21 course to achieve that objective there will be habitat
22 requirements to produce that many animals. So it's
23 important that those requirements, in terms of the
24 amount of habitat, be stated.

25 MADAM CHAIR: But this is what we asked

1 in the scoping; and, that is, what if you don't have
2 pine marten there now and what if you don't have deer
3 there now, and what if you don't have pileated
4 woodpeckers there now, what if those creatures just
5 don't want to live there, are you saying you will
6 insist, you will insist on engineering the habitat to
7 produce that wildlife, they will only be population
8 objectives if they exist there now?

9 THE WITNESS: Yes. But part of the
10 criteria we used to choose provincially -- provincial
11 level featured species, part of the criteria we use was
12 a wide-spread distribution that they be common, they be
13 common in the area of the undertaking. That was an
14 important criteria.

15 So, for example, in the case of the
16 boreal forest, the two featured species, moose and pine
17 marten, generally are ubiquitous in the boreal forest;
18 in other words, they're common in the boreal forest,
19 you'll find them just about everywhere in the boreal
20 forest.

21 If you're referring to certain
22 site-specific conditions where there isn't habitat,
23 there's never been habitat for them, no, Madam Chair,
24 we didn't visualize that.

25 In cases where there has never been

1 habitat for a given species and that species doesn't
2 occur there, we were not, in any way, trying to imply
3 that MNR would be required to engineer habitat for a
4 species that's never occurred in the area of the
5 undertaking.

6 MR. MARTEL: As I understand it then,
7 you're going to allow the citizens committee or the
8 planning team to determine the number of each of these
9 beasties that should be in a certain area depending on
10 whether they're there.

11 How do you quantify the numbers as
12 opposed to the amount of habitat?

13 THE WITNESS: Yes. Biologists can make
14 predictions of the number of animals that could be
15 produced from a given habitat type, what is referred to
16 as carrying capacity, they can actually make those
17 predictions.

18 If I might add though, Mr. Martel, I
19 would add that the Coalition's planning process, in
20 terms of setting those objectives, how many moose for
21 each FMU, it would not only be input from the local
22 citizens committee, it would not only be input from the
23 local public, it would not only be input from the
24 technical planning team, but there would be both
25 provincial and regional level direction provided to the

1 local level, and I hope to fully explain that in Panel
2 9.

3 MR. MARTEL: My problem is the
4 quantification. How do you quantify? You set a
5 target--

6 THE WITNESS: Mm-hmm.

7 MR. MARTEL: --and how do you quantify
8 it? We flew around recently and there were supposed to
9 be moose around Armstrong, only we didn't see a moose
10 around Armstrong and we flew for two days.

11 There weren't suppose to be that many
12 moose around Kapuskasing and golly we saw all kinds of
13 moose around Kapuskasing.

14 Now, tell me how you quantify it,
15 especially birds. If you get down to the pileated
16 woodpecker, are you saying you have an objective and
17 you have a guesstimate of how many are there, or just
18 how far do you take it?

19 THE WITNESS: Well, let's take moose as
20 an example and then I will work towards pileated
21 woodpecker.

22 But we know that, for example, MNR
23 conducts surveys to census moose across the area of the
24 undertaking.

25 MR. MARTEL: They're fairly large. I

1 mean they're --

2 THE WITNESS: Yes.

3 MR. MARTEL: They're a little easier to
4 see than a pileated woodpecker or pine marten.

5 THE WITNESS: Well, well, No. 1, No. 1,
6 yes, moose are a lot bigger than pine marten.

7 MR. O'LEARY: That's a fine point.

8 THE WITNESS: But, Mr. Martel, as you
9 know, pine marten are one of the most common species
10 that are harvested by trappers, so there's a lot of
11 biological data, informations that can be used for
12 population purposes from trapper returns.

13 Just as, in addition to MNR conducting
14 aerial surveys for moose, ground surveys, moose are
15 harvested by hunters and those hunter returns can be
16 used to provide population information as well.

17 So in choosing pine marten, for
18 example -- and the moose in the boreal forest to be
19 featured, again, another criteria we use to select
20 those featured species was the amount of available
21 information we have on things like habitat and
22 population and, as I said, trappers are already
23 collecting some of that data, hunters through returns
24 are providing information.

25 MR. MARTEL: That's the dead ones, how

1 about the live ones though, the ones that are still
2 alive and running around.

3 THE WITNESS: No. Yes, there are various
4 techniques to census live moose, live moose. In the
5 case of the pileated woodpecker in the Great Lakes/St.
6 Lawrence Forest region, No. 1, they are wide spread,
7 they're quite common, they are a large bird, Mr.
8 Martel, and at least in my experience for avid bird
9 watchers et cetera, et cetera, they are easy to detect,
10 large size, easy to detect.

11 There are signs, you know, in terms of
12 where they are, whether they're active or not in a
13 location, easily obtained.

14 And I would also mention that that type
15 of thing is described in the witness statement with
16 reference to the evaluation criteria that we use.

17 MADAM CHAIR: I think Mr. Martel and I
18 don't have as much problem accepting that a judgment
19 could be made or some quantification of a decision
20 that, yes, a species existed in this area; no, it
21 didn't, but to say that you wanted to produce, what
22 number, what number of pileated woodpeckers would you
23 want to produce in a year through a timber management
24 plan.

25 I have no idea. Dozens, hundreds,

1 thousands.

2 THE WITNESS: Well, we might start -- one
3 way to start might be, again, at the level of an FMU.
4 You might start by asking the forest managers, can you
5 produce a forest structure that would maximize pileated
6 woodpecker numbers, and I believe they could do that
7 and you could see from that, from that carrying
8 capacity what the maximum number of pileated
9 woodpeckers that theoretically could be produced from
10 that FMU from that land base.

11 Of course you're also going to have
12 timber, a timber volume associated with that forest
13 structure, you're also going to have deer, a certain
14 -number of deer associated with that particular forest
15 structure, et cetera, et cetera.

16 I guess my point simply is that we're not
17 dictating what the number will be, what we're saying
18 though is it's possible to generate potential
19 population levels, and in generating that it will mean
20 alternate forest structures and it will mean that there
21 will be other benefits associated with it; wood supply,
22 deer supply, and moose supply or whatever, but we are
23 not dictating what that level will be.

24 That can be determined, that can be
25 determined at the local level.

1 But in the case of the pileated
2 woodpecker, of course, one of the reasons that you
3 would want "x" number of pileated woodpeckers in an
4 FMU, No. 2, would be to ensure that there are older
5 age-classes available in that FMU in the sizes and
6 shapes that would not only be good for pileated
7 woodpeckers but would help ensure that we don't lose
8 biodiversity associated with other species as well.

9 MADAM CHAIR: We understand what your
10 argument is, but what we're having a real problem with
11 is, for example, let's use moose again.

12 If you are going to put a number that you
13 have 500 moose in a particular forest management unit
14 and that's published in a timber management plan.

15 THE WITNESS: Mm-hmm.

16 MADAM CHAIR: If I were a member of the
17 public I would say: Well, this is how many moose. You
18 know, you're going to have to explain to me, do you
19 mean you're going to produce them every year, do you
20 mean you're going to produce them over a five-year
21 period, do you mean you're going to count them every
22 year and assure me that you produced that many, is that
23 the entire population of moose in that FMU or the new
24 ones you're going to produce every year.

25 I would think there would be many, many

1 questions and you would never have any way of answering
2 them, you would never have any way. You would put a
3 number in a timber management plan and you would never
4 have any way of explaining to the public what that
5 number meant because you could never go out and count
6 them. I mean, you could use inventories and hunter
7 returns and so forth, but you simply can't tell the
8 public that, yes, that's exactly what you produced.

9 You can say, if we produce "x" number of
10 hectares of moose habitat, we think that would make
11 that many moose, but to put the number, the size of the
12 animal population is really hard for us to accept.

13 THE WITNESS: Would you accept a number
14 -plus a range. In other words, I agree that because
15 we're talking about biological systems a one number
16 target is unrealistic, but we can put some -- a range
17 in terms of, for example, 5,000 plus or minus 1,000,
18 and I also think that --

19 MR. MARTEL: Well, you see that's closer
20 to what the public would anticipate receiving.

21 I mean, you're not going to tell a hunter
22 in northern Ontario that on this whole area there are
23 5,000 moose. He would say, boloney! Unless you could
24 tie them all down and go out and count them, you'll
25 never get an accurate figure.

1 That's why I keep worrying about why you
2 want to quantify to the nth degree, it's pretty
3 difficult for me to believe that on a unit system you
4 could count the number of pileated woodpeckers, I don't
5 care how big they are.

6 We saw in our last trip, we saw in our
7 last trip, they knew exactly where there was a nest for
8 the bald eagle. We flew around that thing three times,
9 even though they knew the nest was there, they knew in
10 which tree and it was late fall, they had a heck of a
11 time just going back and picking it out so that we
12 could see it.

13 And to tell the public you're going to
14 quantify, you might use averages, but I don't think
15 you're going to convince anyone that you can tell
16 exactly how many are there, particularly birds.

17 I mean, we heard the guy -- we heard a
18 witness in Thunder Bay, had it broken down, you know,
19 you could tell by the sound how many there were and so
20 on. Well, you know, I am no bird specialist, but it's
21 hard counting people on the main street of Toronto when
22 you've got a demonstration with everybody standing
23 there, and you want me to believe that this massive
24 area you can tell me precisely how many birds are there
25 and how many moose are there.

1 Man, I mean, that's a hard sell, that you
2 would have difficulty convincing the public is really
3 that specific that you can quantify it to the nth
4 degree.

5 You're talking about ranges, I think it
6 makes more sense. As sophisticated as we might be. I
7 mean, a lake, you've got fish finders, you've got
8 everything, but do you think you can tell how many fish
9 are in the lake, precisely.

10 THE WITNESS: Quite right.

11 MR. MARTEL: That's what our concern is.

12 MADAM CHAIR: Well, there's a second part
13 to that concern, and that has to do with the fact that
14 the Coalition and other intervenors have said they want
15 accountability, they want the Ministry of Natural
16 Resources to be responsible and accountable for
17 producing what people want out of a timber management
18 plan and I don't know, you put "x" number of pileated
19 woodpeckers and I don't know how you can make someone
20 responsible for producing a certain number of birds.
21 When we're talking about habitat --

22 THE WITNESS: They would responsible for
23 producing the habitat required to produce --

24 MR. MARTEL: We understand that.

25 MADAM CHAIR: Here's where we get

1 confused. Some days we hear you saying habitat and
2 then other days we hear population, and term and
3 condition 147 puts both of them together as equally
4 important and necessary.

5 THE WITNESS: Could I just finish by
6 saying, Mr. Martel, that as you know, I mean, there is
7 a provincial moose target, there are district moose
8 targets.

9 MR. MARTEL: Right.

10 THE WITNESS: There are censuses and
11 estimates of current--

12 MR. MARTEL: Estimates, yes, right.

13 THE WITNESS: --herd sizes for each of
14 the districts. We're not asking for anything that is
15 radically different.

16 MR. MARTEL: Okay.

17 THE WITNESS: What we are asking for is
18 that we plan from the land base up and back down
19 because, after all - I sound like a broken record - but
20 after all, it is at the FMU level that the habitat is
21 being manipulated, so we have to start there.

22 MADAM CHAIR: Is this a good time for the
23 afternoon break, Mr. O'Leary?

24 MR. O'LEARY: Yes, it is, Madam Chair.

25 MADAM CHAIR: Thank you.

1 ---Recess at 2:40 p.m.

2 ---On resuming at 3:05 p.m.

3 MADAM CHAIR: Please be seated.

4 MR. O'LEARY: Q. Dr. Quinney, just a
5 couple of questions arising out of the discussions
6 before the break.

7 And the first is, is the Coalition
8 requesting that population objectives for all of the
9 four featured species be required in the timber
10 management plans for the entire FMU or is it being
11 restricted to particular forests?

12 A. There would be population targets for
13 the -- in the case of the boreal forest in the timber
14 management plan there would be population targets for
15 moose and marten and habitat targets, and it is those
16 habitat targets in particular we would want to see the
17 forest managers deliver.

18 Q. All right. And, sorry, you said
19 moose and pine marten, which I didn't quite hear you.

20 A. In the boreal forest.

21 Q. Right.

22 A. We are asking for one additional
23 featured species in the boreal forest, that is the pine
24 marten in addition to currently featured moose.

25 In the Great Lakes/St. Lawrence Forest we

1 are asking for one additional featured species to the
2 present white-tailed deer and that's the pileated
3 woodpecker.

4 Q. All right. Now, a question was asked
5 of you, and I believe the word used was whether or not
6 the Coalition was requiring that the MNR be held
7 accountable for an apparent failure or an inability to
8 meet or evidence that there had been a failure to meet
9 specific species population objectives.

10 Tell me, is that the Coalition's
11 position, are they saying the MNR should be held
12 accountable for, say, a failure to be meet population
13 objectives?

14 A. No, we wish them to be accountable
15 for supplying the habitat required to meet that
16 population target.

17 Q. All right. Dr. Quinney, can I refer
18 you now to the area in your witness statement under the
19 heading Management Effectiveness which is found at page
20 37 of the witness statement. And in response to
21 Question 64 you indicate that:

22 "The proposed modifications of the
23 Coalition are a major improvement towards
24 ensuring an optimum balance among the
25 needs of all wildlife species."

1 You'll see that that reference is in the
2 middle of the first paragraph. Are there some species
3 whose habitat needs will not be addressed by the
4 Coalition's proposal?

5 A. No, at least knowling. Of course
6 there is always the potential of some species that
7 hasn't been discovered or carefully studied whose
8 habitat requirements might be particularly specialized
9 and, if that discovery occurs, then perhaps special
10 management attention would be required.

11 But, again, we do have designations for
12 locally significant species and for special management
13 to take care of those local needs.

14 Essentially, however, what we're saying
15 is by providing a continual supply of forest ecosystem
16 habitats through timber management planning the
17 situation of certain species falling through the pores
18 or falling through the cracks is going to be greatly,
19 greatly reduced.

20 Q. All right. Now, moving on to
21 Question 65 you indicate at part (i) in your response
22 that:

23 "There are a number of factors that
24 determine whether adequate protection is
25 provided. The first is whether a whole

1 or a part of the proposal is
2 implemented."

3 Can you elaborate on what you mean by
4 that portion of your answer?

5 A. Well, perhaps if I use an analogy and
6 the comprehensive approach that we're proposing could
7 be considered like a pail, if you like, a water pail
8 that holds water, and if you put a hole in it; in other
9 words, remove an element, it's not going to hold all
10 that water. So we've tried hard to develop a
11 comprehensive approach that should be adopted as a
12 package.

13 Q. I think, Dr. Quinney, we're now going
14 to move on to questions that the Board would like to
15 see you respond to as stated in the transcripts and
16 following as a result of the scoping session.

17 And the first deals with pages 10 and 11
18 of your witness statement with respect to biodiversity.
19 And the Board indicated that they had reviewed the
20 studies behind Tab 16 and in relation to Atlantic
21 Canada and they were wondering whether or not you would
22 be presenting evidence to support your statement that
23 there are similar reductions in stands and forest level
24 biodiversity which have begun to occur in Ontario.

25 A. Yes, and I responded to that Board

1 request through interrogatories to FFT No. 6 and MNR
2 No. 5(b)

3 Q. 5(b)?

4 A. 5(b).

5 Q. Then with respect to old growth
6 forests, the Board made reference to Dr. Euler's
7 opinion that there is no emergency situation in
8 Ontario, and the Board would like your opinion and any
9 comments you might have in respect of Dr. Euler's
10 opinion in the evidence that there's no emergency
11 situation in Ontario in respect of old growth forests.

12 A. Well, I disagree with Dr. Euler, but
13 emergency may not be the right word. Certainly
14 immediate steps should be taken and there are no
15 Ministry of Natural Resources terms and conditions
16 which address this issue.

17 Q. All right. You stepped into the very
18 next question the Board indicated they would like to
19 hear from you. They were asking whether or not you
20 could comment on whether there are any proposals within
21 the MNR's timber management planning process as it
22 works now and as identified in their terms and
23 conditions in respect of biodiversity that protects
24 biodiversity that you would support.

25 A. Well, I don't see their terms and

1 conditions dealing effectively with the maintenance of
2 biodiversity, particularly ensuring future supplies.

3 Q. Another question that the Board would
4 ask you to address is, is it different in the boreal
5 forest versus the Great Lakes/St. Lawrence Forest with
6 respect to the area of the undertaking.

7 Are you proposing that the same
8 management approach process be applied to both types of
9 forest, being boreal and the St. Lawrence/Great Lakes,
10 and are there different measures that you would want to
11 see with respect to one in comparison with the other?

12 A. Well, there may very well be
13 differences in biodiversity between the boreal forest
14 and the Great Lakes/St. Lawrence Forest.

15 I think in that regard it makes a
16 management approach for the maintenance of biodiversity
17 in the boreal forest even more important, but the
18 biodiversity management approach that I described today
19 pertains to the boreal forest.

20 Neither I nor the Coalition have
21 developed a management proposal for biodiversity in the
22 Great Lakes/St. Lawrence Forest. So the approach that
23 I've described is pertaining to even-aged management
24 situations.

25 Now, I'm not in any way suggesting that

1 it's not important to address biodiversity management
2 in the Great Lakes/St. Lawrence Forest region, it is
3 important, but it's difficult, and the Coalition does
4 not have a proposal to put forward at this time.

5 Q. Next, Dr. Quinney, the Board referred
6 us to the Coalition's proposal for protecting 10 per
7 cent of the old growth forest.

8 And the first question that was asked is,
9 that the Board indicated it had not as yet added up the
10 percentage of all forest -- the percentage of all
11 forest that parties have suggested be taken out of
12 production, and the concern being that the aggregate,
13 as suggested by the parties, may exceed a hundred per
14 cent.

15 Can you advise us, how does the
16 Coalition's proposals affect the productive forest
17 landscape?

18 A. I would make several points for the
19 Board. The Coalition is not taking any land out of
20 timber production, what we're proposing to do is
21 regulate the distribution of age-classes by FEC type
22 within a given FMU.

23 What we're saying is that there must be a
24 continual supply of the oldest age-classes. So our
25 proposal does not affect the available forest

1 productive land base.

2 MR. MARTEL: Could I stop you there
3 though, because I'm just going back now by memory, but
4 I think it was the Wildlife League in Ottawa wanted 12
5 per cent of the land base governing all of the various
6 types of forest coverage that was there.

7 Now, how does that tie in with yours?
8 I understood theirs to be permanent, that they wanted
9 12 per cent on a permanent basis. Now, how does that
10 tie in with yours that rotates which would cover theirs
11 part-time, I presume, and then go on down the road. I
12 mean, because yours rotates and theirs doesn't, it's...

13 THE WITNESS: What I would say, Mr.
14 Martel, is firstly that the Coalition's terms and
15 conditions are worded such that reserves, okay,
16 reserves can count towards the 10 per cent, it must
17 remain in the oldest age-class in each FEC type, but
18 that parks in my opinion are an entirely different
19 issue, and the reason in my mind that they're an
20 entirely different issue is that in parks, parks are
21 not necessarily going to be providing a continuous
22 supply.

23 For example, if you put a fence around
24 that park and you say, we're going to protect it for
25 ever then, for example, say that park presently

1 consists of all old growth, you know, white pine 300
2 years old, well what happens when those 300-year-old
3 stands die or get eaten by insects, it will take an
4 awful long time, awful long time.

5 In other words, I guess what I'm saying
6 is, the purpose of parks can be radically different.

7 MR. MARTEL: But the Wildlife League I
8 don't think were talking about parks; were they? I
9 certainly didn't -- I guess it depends on what
10 interpretation you want to put, you know. But if you
11 look at parks and what the province has set aside and
12 you look at reserves that are going to be set aside
13 around certain lakes and so on, if you take a look at
14 the 12 per cent the Wildlife League wants, and you take
15 10 per cent of the he oldest age-class you're talking
16 about, and you take the 30 per cent that Treaty 3
17 wants, and I think 20 per cent that the Metis want.

18 Well, my colleague and I could go home
19 today, we could just say, give everybody the land they
20 want and the ball game is over, we're going to go home
21 because I just don't know if any of you have sat down
22 together and said: What's all this mean.

23 I mean, this here, that there and some
24 here, there's nothing left. Maybe I'm misreading it,
25 but I'd sure like a clearer picture from the various

1 parties as to what it really means when everybody's got
2 their bite.

3 THE WITNESS: In terms of our Coalition,
4 I will reiterate, that we are not taking the lands--

5 MR. MARTEL: Oh, I know.

6 THE WITNESS: --out of the production
7 land base, and you have mentioned that, for example,
8 existing reserves or buffers around lakes or streams in
9 our proposal could contribute to that 10 per cent in
10 the oldest age-classes.

11 MR. MARTEL: But that's what makes the
12 calculation all that much more difficult to get to the
13 bottom line, as you rotate and move around.

14 I just don't know if the parties have
15 taken a look at very seriously that question of what it
16 does when one tries to make a plan if you're moving
17 around and someone's taking this bit for a while and
18 then moving on and there's a park reserve here and
19 there's a park there and there's a reserve around this
20 lake.

21 Have any of you decided maybe we should
22 sit down and just see what this all looks like. If we
23 all got our chunk of the pie at given times, yours is
24 floating I understand that, but in terms of attempting
25 to plan, how do you do it?

1 THE WITNESS: Well, I would say in
2 attempting to plan, our proposal is just as practical
3 and feasible.

4 MR. MARTEL: I'm not just taking yours
5 though, Dr. Quinney. That's what worries me, I don't
6 want to isolate your group, okay, I'm trying very hard
7 to stay away from that.

8 I'm saying when all of the parties, have
9 yous looked at what it really means in terms of the
10 amount set aside, how you would plan around it if
11 everybody got what they wanted.

12 THE WITNESS: I can't speak to what
13 everybody else--

14 MR. MARTEL: It's a question that has to
15 be answered shortly or soon.

16 THE WITNESS: --what everybody else
17 wants, but I would say in terms of our Coalition that
18 planning will proceed in exactly the way wood supply
19 calculations are done now.

20 Wood supply estimates take into account
21 reserves, age-classes, et cetera, et cetera. We're not
22 asking for anything radically different in that
23 respect.

24 MR. MARTEL: Well, as the land base gets
25 smaller though, Dr. Quinney, that becomes more

1 difficult.

2 THE WITNESS: I agree with you if there
3 are, for example, additional -- within the forest
4 productive land base, if there are additional areas set
5 aside for no activity, I agree.

6 MR. MARTEL: That is all I'm trying to
7 get some kind of handle on, what it really means.

8 MADAM CHAIR: Mr. O'Leary.

9 MR. O'LEARY: Q. Moving on, the next
10 question somewhat flows from Mr. Martel's question and
11 the Board wants to know:

12 "Do the Coalition's proposals require
13 the exclusive non-use of the 10 per cent
14 that the Coalition is suggesting of
15 the oldest age-class be protected?"

16 Does the Coalition's proposals require
17 the exclusive non-use of that particular portion of the
18 FMU?

19 A. No. And, again, I've tried hard to
20 explain that the proposal is not going to affect that
21 available forest productive land base.

22 MADAM CHAIR: Excuse me, Dr. Quinney,
23 does that mean in these areas all other non-timber use
24 could proceed as--

25 THE WITNESS: Oh yes.

1 MADAM CHAIR: --as the public wishes, or
2 would you allow mining exploration?

3 THE WITNESS: Oh, if it affected the
4 forest structure in terms of those age-classes, no.

5 That proportion in the oldest age-class
6 must remain but, to be honest, I'd thought that -- if
7 there was an example where mining activities were
8 affecting forest structure, then I would certainly want
9 to see what that impact was.

10 MADAM CHAIR: Would you allow a tourist
11 operator to begin a business in such an area?

12 THE WITNESS: I don't see why not and, in
13 fact, we would firmly support as many multiple benefits
14 coming out of that forest structure as possible.

15 MR. O'LEARY: Q. Dr. Quinney, if the
16 Board adopts the Coalition's terms and conditions in
17 respect of this 10 per cent feature, how much of the
18 productive forest land base will be permanently removed
19 from the picture?

20 A. None will be permanently removed,
21 it's a temporary deferral until the 10 per cent is
22 achieved.

23 Q. And would there be any situations
24 where there would be no deferral in terms of commercial
25 activities in a particular FMU?

1 A. I can't think of one off the top of
2 my head.

3 Q. All right. And moving on, the Board
4 directed us to page 21 of your witness statement where
5 you indicate that Ontario is seriously lagging behind
6 in GIS technology.

7 The Board would like to know which
8 jurisdiction Ontario is lagging behind and in what way
9 specifically the MNR is lagging behind in terms of GIS
10 technology in comparison to these other jurisdictions.

11 A. Madam Chair, Mr. Patch and Dr. Page,
12 Mr. Patch from New Brunswick and Dr. Page from British
13 Columbia, will specifically address that question in
14 their evidence in the next panel, Panel 7, and also Mr.
15 Stewart from Saskatchewan in Panel 9.

16 MADAM CHAIR: I think, Dr. Quinney,
17 they'll be able to tell us what's going on in their
18 provinces, I don't think they'll be able to say
19 anything about the situation in Ontario.

20 Do you have any knowledge yourself with
21 respect to what MNR is doing with GIS technology, and I
22 am not talking about the ultimate use of it in HSA,
23 which is what your client would like to see.

24 THE WITNESS: One of the uses, yes.

25 MADAM CHAIR: But is it your view that

1 MNR is attempting to develop GIS technology, that a
2 start has been made to do that?

3 THE WITNESS: A start has definitely been
4 made in certain locations in the province. For
5 example, it's my understanding that the TDUs, at least
6 the northern region technology development unit has GIS
7 technology. I believe it's the ARC INFO system.

8 We know that in addition Dr. Duinker from
9 Lakehead University is actively I believe using GIS and
10 HSA in the Aulneau Peninsula.

11 So, yes, there are examples in the
12 province where GIS is being used and we would certainly
13 like to see that expanded as soon as possible.

14 MR. O'LEARY: Q. Do you know, Dr.
15 Quinney, whether or not MNR is in the process of
16 exporting the GIS technology anywhere outside of
17 Ontario or Canada?

18 A. I can't recall. I believe they may
19 very well -- MNR may very well have a contract with, in
20 fact, another country to transfer that technology, but
21 again, off the top of my head, I can't recall the
22 location or details.

23 Q. All right. You were next directed to
24 page 25 of the witness statement, and in the last
25 paragraph the Board came to the conclusion that it

1 appeared that you were critical of how knowledge of new
2 research is disseminated or is learned by staff at the
3 MNR.

4 The assumption was drawn that this is a
5 criticism of the technical development unit approach
6 and of MNR staff training programs for timber
7 management planning.

8 Can I ask you: What is the Coalition's
9 position in respect of the MNR's TDU process?

10 A. Well, firstly, neither me personally
11 nor the Coalition would like to give the impression
12 that we're not fully supportive of the TDUs. We think
13 that they're great, they're doing good things. These
14 are excellent initiatives. We would certainly like to
15 see those tools transferred to the local levels as soon
16 as possible.

17 Q. Next we were directed to page 26 of
18 your witness statement where there's reference made to
19 your desire that COFRDA money become available and that
20 it would be invested, some part of it, in certain types
21 of analysis.

22 And the Board would like to know if such
23 monies are not made available, which areas, if any, of
24 current research and spending would the Coalition
25 propose be redirected away from the present research

1 and spending towards those advocated by the Coalition
2 presumably in respect of biodiversity research and
3 analysis?

4 A. Madam Chair, that's a very difficult
5 question for me to answer with the information at my
6 disposal.

7 I mean, I really think that I would need
8 to look at MNR budgets, where the money is going now,
9 et cetera, et cetera, and our Coalition hasn't been in
10 a position to do that type of thing.

11 Q. In terms of priorities, do you have
12 an opinion as to the level of importance that should be
13 given to biodiversity matters?

14 A. Oh yes. It's my personal feeling and
15 that of the Coalition that this issue of biodiversity
16 and incorporating management for biodiversity into
17 timber management planning is a high priority at the
18 present time.

19 Q. Finally, the Board makes reference to
20 page 27 where you indicate that it's your view that a
21 species be designated as being locally significant only
22 if it actually exists already in a certain area, or the
23 Board would like to know, would you designate a species
24 as being locally significant that couldn't be found in
25 and area but the public would, for some reason, like to

1 have it there?

2 And the Board would like to know under
3 the Coalition's plan whether the wildlife species would
4 have to exist in an area before it was so designated,
5 or would it have to be proven to exist in an area
6 before it was designated as being locally significant?

7 A. Yes, a very good question. Perhaps I
8 could answer it in this way; and, that is, the
9 Coalition certainly sees the place for certain types of
10 reintroduction programs, that is reintroducing species
11 that once occurred in various locations in Ontario but
12 at present, or until recently didn't; in other words,
13 they disappeared because of some human, usually some
14 human activity, and let me give you a couple of
15 concrete examples.

16 MR. MARTEL: Wild turkeys.

17 THE WITNESS: Exactly, wild turkeys. For
18 several years OFAH has worked in conjunction with MNR
19 to reintroduce that bird that was a native to southern
20 Ontario.

21 More recently OFAH is working with MNR
22 with reference to the potential to reintroduce an elk
23 population to northwestern Ontario. Elk used to be in
24 certain locations in northwestern Ontario. So that in
25 some cases should be a viable operation.

1 What I would stress though is there are
2 existing mechanisms and programs that can facilitate
3 that kind of stuff, for example, partnerships between
4 NGOs, government.

5 MADAM CHAIR: So what you're saying, Dr.
6 Quinney, the use of the featured and local species
7 approach, you wouldn't expect it to bear the entire
8 responsibility for wildlife programs such as the
9 reintroduction of species?

10 THE WITNESS: No.

11 MR. MARTEL: How far did the -- the local
12 turkeys which disappeared - we're not talking about
13 two-legged ones that walked - how far north did they go
14 -at one time?

15 THE WITNESS: I think there was
16 correlation between snow accumulation, snow
17 accumulation and their range.

18 So in Ontario, I don't think we're
19 talking beyond, you know, sought of North Bay. They
20 were not -- historically, to my understanding, they
21 were never very far north.

22 MR. MARTEL: North Bay.

23 THE WITNESS: (nodding affirmatively)

24 MR. O'LEARY: Q. Dr. Quinney, just one
25 last question, if I take you to page 40 of your witness

1 statement you've prepared a summary there. You
2 indicate that there's four essential messages, and I
3 just would like to ask you whether or not you have any
4 additional comments you would like to make at this time
5 in respect of the four messages identified on that
6 page?

7 A. No. I would simply finish by saying
8 I believe the Coalition is putting forward a
9 comprehensive yet practical and feasible management
10 approach to ensuring that these values are maintained
11 through timber management planning in perpetuity in
12 this province.

13 MR. O'LEARY: Thank you, Madam Chair.
14 -That is the evidence-in-chief.

15 MADAM CHAIR: Thank you, Mr. O'Leary.
16 Mr. Lindgren, you will be cross-examining?

17 MR. LINDGREN: Yes I will, Madam Chair.

18 MADAM CHAIR: Are you ready to proceed.
19 We have another 20 minutes today.

20 MR. LINDGREN: I can start, Madam Chair.

21 MADAM CHAIR: All right, thank you.

22 Your cross-examination will be under two
23 hours, Mr. Lindgren?

24 MR. LINDGREN: Well, I'm expecting
25 approximately one hour.

1 MADAM CHAIR: One hour. And Mr. Freidin?

2 MR. FREIDIN: I'm going to be hard
3 pressed to finish tomorrow, but I will do my best.

4 MADAM CHAIR: Thanks, Mr. Freidin.

5 MR. MARTEL: Plane leaves at 5:30.

6 MR. FREIDIN: Thursday at 5:30.

7 MR. MARTEL: 5:30.

8 MADAM CHAIR: Please go ahead, Mr.
9 Lindgren.

10 MR. LINDGREN: Thank you, Madam Chair.

11 CROSS-EXAMINATION BY MR. LINDGREN:

12 Q. Dr. Quinney, I heard your first
13 message this morning and that was that, in your view,
14 -biodiversity is important and that it needs to be
15 incorporated into timber management planning. Do you
16 recall that testimony?

17 A. Yes.

18 Q. By timber management planning, I
19 would take it you're referring to planning for all
20 timber management activities such as access, harvest,
21 renewal and maintenance?

22 A. Yes.

23 Q. So your comments are not specifically
24 focused on harvest?

25 A. No, they're not.

1 Q. I have a series of general
2 propositions or principles I would like to put to you
3 for comment and perhaps I can begin by asking you to
4 refer to Exhibit 2089 which was the memo and the
5 Wildlife Habitat Management in Ontario paper.

6 A. Yes.

7 Q. Could I ask you turn to page 5 of
8 that document.

9 A. The From Policy to Practice paper,
10 page 5?

11 Q. That's correct.

12 A. Mm-hmm.

13 Q. At the top of the page under the
14 -heading The Future of Habitat Management in Forests, we
15 see a statement to the effect that:

16 "As emphasized by the wildlife working
17 group, the goal for wildlife and
18 forest managers in Ontario should be to
19 maintain biodiversity."

20 Do you agree with that statement?

21 A. Yes, I do.

22 Q. Can we agree then that maintaining
23 biodiversity should become the overriding land use
24 management objective for the managers of Crown forests
25 in Ontario?

1 A. I believe that the principle of
2 maintenance of biodiversity should be a guiding
3 principle.

4 Q. Well, I'm not sure that answers my
5 question. Perhaps I'll come at it this way. Can we
6 agree that if we're serious about obtaining the
7 objective of maintaining biodiversity, if we want to do
8 that, then other management activities should ensure
9 the maintenance of the diversity of plants and animals
10 and ecosystems within the province?

11 A. Yes.

12 Q. Okay. More specifically, the
13 management of our Crown forests must result in the
14 maintenance of species diversity and genetic diversity
15 and ecosystem diversity.

16 Do you agree with that statement?

17 A. Yes. As I explained to the Board
18 this morning, there are different levels and different
19 elements and, yes, they should be maintained.

20 Q. And the converse --

21 A. Sustained actually.

22 Q. Thank you. And the converse is that
23 management activities which reduce biodiversity should
24 not be approved or undertaken within Crown forests?

25 A. Well, Mr. Lindgren, I'd like to look

1 at -- are you referring to a particular scale in the
2 forest, a particular -- a level and a particular time
3 frame. In other words I would, for example, certainly
4 not support an activity that on the ground that
5 resulted in the extinction of a species.

6 Q. Well, we had reference this morning
7 to a paper by Mr. Welsh where he indicated that certain
8 timber management activities have resulted in the loss
9 of certain bird species, and I take it that you would
10 see that as an undesirable?

11 A. The loss of a species I would
12 definitely consider to be undesirable. What Dr. Welsh
13 was advocating, and I agree with it, was to ensure that
14 somewhere in the landscape was a continual supply of
15 all age-classes so that you would prevent that type of
16 thing from occurring.

17 Q. Now, in Exhibit 2088 you refer to the
18 different types of diversity and different levels of
19 diversity, and I want to ask you the same question I
20 just put to you but with respect to each one of those
21 levels of diversity.

22 In your opinion, if a timber management
23 activity reduced or was likely to reduce the amount of
24 genetic diversity within the area of the undertaking, I
25 take it that you would not say that that activity

1 should be approved or undertaken?

2 A. We're at the genetic level?

3 Q. Yes.

4 A. My answer would be, I would not want
5 to see an activity undertaken that would result in the
6 loss of genetic information.

7 Q. Thank you.

8 A. But it depends on the scale at which
9 we're talking about. In other words we can maintain,
10 for example, over an FMU, by supplying all the
11 age-classes that are necessary, we are going to be
12 supplying the habitats required to support the species
13 that requires those habitats and, therefore, we're
14 -going to be supporting the genetic diversity within
15 those species throughout those age-classes in those
16 habitats.

17 Q. Well, perhaps we can cut short this
18 discussion and fast forward it to forest diversity. I
19 take it that you would not advocate approving or
20 undertaking timber management activities that have the
21 potential to reduce forest level diversity?

22 A. I certainly wouldn't want to see a
23 timber management activity that, as an example,
24 resulted in the loss of a FEC type, uh-huh.

25 Q. Okay, thank you.

1 I think you mentioned this already, but
2 perhaps to summarize this portion of the evidence, I
3 take it that you would agree with me that the key
4 overall challenge is to ensure that we conserve and
5 supply a sufficient amount of ecosystems that are
6 currently present in the natural landscape?

7 A. Yes.

8 Q. Okay. And that's why we need a
9 landscape level approach to maintain forest
10 biodiversity?

11 A. We definitely need a forest level
12 approach.

13 Q. In fact, a landscape level approach
14 is essential to maintaining forest level biodiversity?

15 A. Yes.

16 Q. Now, at page 3 of Exhibit 2088, which
17 is your set of figures and diagrams, we see a schematic
18 of the various elements of forest biodiversity and we
19 see the forested landscape at the top of the hierarchy.

20 Can I take it that what you're trying to
21 convey here is a message that forest diversity includes
22 or subsumes the other elements of diversity such as
23 genetic diversity, species diversity and stand
24 diversity?

25 A. Forest level biodiversity, yes,

1 includes those other levels, those other elements.

2 Q. So it's absolutely essential that we
3 maintain forest level biodiversity and that should be
4 our overall objective?

5 A. That should be one of our objectives.

6 Q. I would ask you to turn to your
7 witness statement at page 37, and at paragraph 64 I see
8 a reference to ensuring an optimum balance between
9 wildlife -- you see the word 'optimize' used actually
10 three times in that response; elsewhere you've used the
11 term tradeoff.

12 A. Mm-hmm.

13 Q. Can we agree that if the overall goal
14 of public forest managers is the maintenance of
15 biodiversity, then we should not be trading it off
16 against other forest values or forest benefits. Would
17 you agree with that statement?

18 A. No, I do not, Mr. Lindgren. Madam
19 Chair, Mr. Martel, I use the word 'optimize' to
20 indicate what the expressed public desire is from their
21 Crown lands.

22 What I can do as a biologist is assist
23 the public in knowing if a certain activity is
24 conducted what the ecological consequences of that
25 activity might be, but it is up to the public to decide

1 what they want from their public lands.

2 Q. Well, I thought we agreed a few
3 moments ago, Dr. Quinney, that you, as a member of the
4 public, would not be in favour of a timber management
5 activity that would reduce diversity.

6 A. Yes. Personally, yes.

7 MR.O'LEARY: That wasn't exactly what he
8 said.

9 MR. LINDGREN: Q. Was that what you
10 said, Dr. Quinney?

11 A. Sorry, would you repeat the question?

12 Q. The question was: A few moments ago
13 I thought we had established that you would not be in
14 -favour of approving or undertaking timber management
15 activities that would reduce biodiversity.

16 MR. O'LEARY: The words loss or
17 extinction was used by the witness.

18 THE WITNESS: Yes, that's right. And I
19 also mentioned that, of course, scale and time horizons
20 are important here too.

21 MR. LINDGREN: Q. Under your proposal,
22 Dr. Quinney, would it be possible for a local citizens
23 committee to say: We don't really care about
24 biodiversity, we don't care about having warblers, we
25 want lots of moose or we want jobs, so we're not too

1 interested in maintaining any level of biodiversity in
2 our forest, we just want to maximize the production of
3 timber or moose. Is that possible under your scenario?

4 A. Not according to the Coalition's
5 terms and conditions, because as part of the terms and
6 conditions we are actually requesting that one of the
7 objectives in timber management plans include supplying
8 forest ecosystem types to maintain or enhance
9 biological diversity.

10 Q. But didn't you just tell me that it
11 would be open for local citizens to decide what kind of
12 timber management activity should occur within the
13 unit.

14 I thought we had heard in your evidence
15 that what goes on in the FMU is essentially a function
16 of what the local people want to see occur in that
17 unit.

18 A. Ah, no, that is not what I said.
19 What I said was, you will hear in Panel 9 a full
20 explanation of how objectives are set. Those
21 objectives will be set with -- the specific objectives
22 will be set with assistance, okay, from people at the
23 local level, the general public, the local citizens
24 committee, the planning team, but also from the
25 regional and the provincial level as well.

1 Q. Under your scenario, Dr. Quinney, is
2 it possible for local people to decide, we don't want
3 to supply any more FECs that would house, for example,
4 a warbler or an orchid, we want FECs that produce moose
5 or timber. Can that be done under your scenario?

6 A. Under my scenario could only moose
7 habitat be produced, no.

8 Q. Well, perhaps the reason I'm having a
9 little difficulty with your answer, Dr. Quinney, is I
10 don't see anywhere in your terms and conditions where
11 that is prohibited.

12 I see nothing in your terms and
13 conditions that would prevent local citizens committees
14 from "trading off" warblers or FEC types for the
15 purpose of "maximizing or optimizing some other benefit
16 or value from the forest".

17 Can you point to any specific term and
18 condition that would prevent that from happening?

19 A. Yes. I would point you towards our
20 biodiversity terms and conditions which are on page 27
21 of our terms and conditions. 27 of our terms and
22 conditions, specifically term and condition 160 states:

23 "The stand prescriptions in the TMP
24 shall be designed to ensure that at a
25 minimum 10 per cent of the total

1 aggregate area in each FEC type in the
2 FMU remains in the oldest seral state
3 in perpetuity."

4 So that means every FEC that occurs in
5 the FMU is going to have 10 per cent of its oldest
6 age-class maintained in perpetuity, and it also means
7 that in order to supply that 10 per cent there are
8 going to have to be younger age-classes coming along.

9 Q. Well, I do have a number of questions
10 for you on the 10 per cent constraint, but my question
11 at this time is different.

12 How does that term and condition prevent
13 a local citizens committee from saying, we don't want
14 warblers, we don't want orchids, we don't really care
15 about much diversity on the landscape, we want moose or
16 we want timber.

17 A. Well, it states explicitly -- sorry,
18 Mr. Lindgren, but the term and condition is stated
19 there explicitly.

20 Q. Well, I'll leave it at that.

21 MR. MARTEL: Do you see the possibility -
22 and it goes back to what we originally discussed last
23 week - the possibility, and maybe you said you were
24 going to answer it later on, of the local citizens
25 committee in fact changing the DLUGS or strategic land

1 use plans which are coming down from above?

2 I mean, if they can't change that, then I
3 would suspect some of Mr. Lindgren's fear disappears.

4 THE WITNESS: You're quite right, I
5 committed to explaining that fully in Panel 9.

6 MR. MARTEL: Okay, Panel 9.

7 MR. O'LEARY: That's quite right, Mr.
8 Martel.

9 MR. LINDGREN: Well, I have no doubt that
10 we will return to this issue of tradeoffs in Panel 9
11 and how it's done.

12 MR. FREIDIN: I'm sorry, did Mr. O'Leary
13 indicate that we wouldn't get an answer to that
14 undertaking until Panel 9?

15 MADAM CHAIR: That's what he said, Mr.
16 Freidin.

17 MR. FREIDIN: Well, I would like to raise
18 that now.

19 MR. O'LEARY: Sorry.

20 MR. FREIDIN: I would like to raise that
21 now. I raised the matter in Panel 4, I indicated the
22 importance to my client in respect to having that
23 answer as early as possible, because if I'm going to
24 cross-examine witnesses as to the --

25 MR. O'LEARY: I can short circuit you.

1 If your question is whether or not we're going to have
2 the response to the undertaking we gave in respect of
3 term and condition 5 and related terms and conditions
4 prior to Panel 9 appearing, the answer is yes.

5 MR. FREIDIN: Oh, okay.

6 MR. O'LEARY: Is that what you're asking?

7 MR. FREIDIN: Yes.

8 MR. O'LEARY: No, no. We will have that,
9 we hope late next week or possibly early the next week.

10 MR. FREIDIN: All right, thank you.

11 MR. LINDGREN: Madam Chair, I'm about to
12 start on another subject matter. Perhaps this would be
13 an appropriate time to break.

14 MADAM CHAIR: All right, that will be all
15 for today then and we'll see you at nine o'clock
16 tomorrow morning, Mr. Lindgren.

17 MR. LINDGREN: Thank you, Madam Chair.

18 ---Whereupon the hearing was adjourned at 4:00 p.m., to
19 be reconvened on Thursday, February 6th, 1992,
20 commencing at 9:00 a.m.

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